# ellucian...

# **Banner Finance** TRM Supplement

Release 8.10, Revision 1 September 2014



Banner®, Colleague®, Luminis® and Datatel® are trademarks of Ellucian or its affiliates and are registered in the U.S. and other countries. Ellucian™, PowerCampus™, Advance™, Degree Works™, fsaATLAS™, Course Signals™, SmartCall™, Recruiter™, and ILP™ are trademarks of Ellucian Company L.P. or its affiliates. Other names may be trademarks of their respective owners.

©1999-2014 Ellucian Company L.P. and its affiliates. The unauthorized possession, use, reproduction, distribution, display or disclosure of this material or the information contained herein is prohibited.

Contains confidential and proprietary information of Ellucian and its subsidiaries. Use of these materials is limited to Ellucian licensees, and is subject to the terms and conditions of one or more written license agreements between Ellucian and the licensee in question.

In preparing and providing this publication, Ellucian is not rendering legal, accounting, or other similar professional services. Ellucian makes no claims that an institution's use of this publication or the software for which it is provided will guarantee compliance with applicable federal or state laws, rules, or regulations. Each organization should seek legal, accounting and other similar professional services from competent providers of the organization's own choosing.

Prepared by: Ellucian 4375 Fair Lakes Court Fairfax, Virginia 22033 United States of America

#### **Revision History**

Publication Date	Summary
August 2014	New version that supports Banner Finance 8.10 software.
September 2014	Added information for the Receiving/Matching Process (FABMATC).

# **Banner Finance 8.10 TRM Supplement**

## **Contents**

Chapter 1	Reports and Processes1-1
	Reports
	Accounts Payable1-1
	Budget Development
	Cost Accounting
	Fixed Assets
	General Ledger
	Purchasing and Procurement
	Stores Inventory
	Financial Utilities
	Position Control
	Archive/Purge
	Research Accounting
	Endowment Management
	Grant Interface
	Miscellaneous
	Comprehensive Annual Financial Reports (CAFR)
	Processes
	FGBTRND Performance Improvements
	FGRBAVL Rebuild Process
	FGRGRBD Grant Rebuild Process
	Deferred Grant Accounting Process (FRRGRNT)
	Transaction Interface Process (FGRTRNI)
	Posting Process (FGRACTG)
	NIGP Tape Load Process
	Finance Check Processing

	Stores Inventory
	Cost Accounting
	Fixed Assets
	Endowments
	Budget and Position Control — Budget Development
	General Financial Utilities — User Profile/Security/Approvals
	Accounts Payable
	General Ledger
	General Utilities
	Conversion Tables
Chapter 3	Conversion3-1
	Interfaces within Banner
	Interfaces with External User Systems
Chapter 2	Interfaces2-1
	Sleep/Wake-up
	SQL*Plus Scripts
	Running Oracle Reports with Finance
	Reports and Processes Attributes
	Reports and Processes Matrix
	Archive/Purge
	Year-End Processing Checklist
	Receiving/Matching Process (FABMATC)

	Other API Packages
	Support Packages
	Validation Packages
	Types of APIs Used for Invoicing
	Business Entity APIs
	Business Process APIs
Chapter 5	System-Required Data5-1
	Overview
	Finance Tables, Group 1 5-2
	Finance Tables, Group 1 - System-Required Rows
	Finance Tables, Group 2

## 1 Reports and Processes

This chapter lists the Finance reports and processes by module, and provides a brief description of each. The Reports and Processes matrix provides information about when each report/process can be run. Information about SQL Scripts that help you in producing summary reports is also provided here.



For a detailed description of each report and its parameters, generate the List of Reports and Parameters (GJRRPTS). This report also includes batch processes.

## **Reports**

#### **Accounts Payable**

Report Identifier	Report Name	Report Description
FAB1099	1099 Forms Print	Creates 1099 forms for selected vendors to report to the IRS.
FAB199K	1099-K Forms Report	Creates 1099-K forms (Merchant Card and Third Party Network Payments) for selected vendors to report to the IRS.
FABCHKD	Disbursement Check Report	Lists checks you wrote to disbursing agents.
FABCHKP	Check Print Process	Prints out selected checks.
FABCHKR	Batch Check Register Report	Shows a hardcopy output generated after you execute Batch Check Print processing (FABCHKP), and before you execute the Batch Check Accounting Process (FABCHKA). The Batch Check Register Report contains a listing of only those check numbers that you print during the FABCHKP process.
FABMATC	Receiving Matching Process	Matches invoice to receiving information, and produces an audit report.

Report Identifier	Report Name	Report Description
FAM1099	1099 Tape Summary Audit Report	Builds the magnetic 1099 tape file and a summary audit report.
FAPCDIR	Canadian Direct Deposit File Creation Process	Allows you to create a file of direct deposit transactions to send to your bank/clearing house.
FAPDIRD	Direct Deposit File Creation Process	Creates a file of direct deposit transactions that you will send to your bank/clearing house.
FAPTREG	Direct Deposit Transmittal Register	Prints the transmittal register that will accompany the direct deposit file to the bank.
FARAAGE	Bank Reconciliation- Activity Aging Report	Shows outstanding checks or deposits less than 30 days to over 120 days.
FARBBAL	Bank Reconciliation Balance Report	Shows the bank reconciliation.
FARBREC	Bank Reconciliation Report	Shows the actual bank reconciliation items.
FARCHKR	Check Register Report	Lists checks by check number and date.
FARCSHR	Cash Requirements Report	Displays the predicted cash requirements for your installation's banks based on accounts payable data.
FARDIRD	Direct Deposit Advance Print Process	Prints out advice notices for selected direct deposit disbursement.
FARIAGE	Invoice Aging Report	Displays unpaid invoices in date sequence. Invoice totals appear in 30-day periods.
FARINVS	Invoice Selection Report	Displays checks to print on next check run.
FARIREC	Invoices Awaiting Receiver Report	Lists invoice, commodity, and receiver information for invoices awaiting the final receiving/matching process.
FAROINV	Open Invoice Report	Details the invoices and credit memos that are open based on the "As of Date" selected by the user.
FARVALP	Vendor Alphabetical Listing Report	Lists vendors in alphabetical order.

Report Identifier	Report Name	Report Description
FARVHST	Vendor History Report	Displays payment activity for a particular activity.
FARVNUM	Vendor Numerical Listing Report	Lists vendors in numerical order.
FARWHLD	1099 Reporting/ Withholding Status Report	Indicates the federal and state government withholding tax and reporting data by vendor, for purchases which are subject to the IRS 1099 reporting requirements.
FARWHLY	1099 Reporting/ Withholding Audit Report	Indicates the federal and state government withholding tax and reporting data by vendor, for purchases which are subject to the IRS 1099 reporting requirements. You can also use this report to verify the accuracy of distributions made to each vendor with income type.
FABCHKA	Check Accounting Process	Takes all check information and creates accounting data which posts in the next posting run.
FABCHKS	Batch Check Process	Selects the checks and information that pertains to the current check job.
FATCHKS	Check Test Pattern	Prints out a test check on special forms.
FAT1099	1099 Test Pattern	Prints out a test 1099.

## **Budget Development**

Report Identifier	Report Name	Report Description
FBRAPPD	Approved Distributed Budget Report	Displays the distributed budget by period, the current year budget, prior year budget, and the variance of the current year to the budget year.
FBRAPPR	Approved Budget Report	Displays the approved phase budget along with the prior year, current year, and the variance of the approved budget to the current amounts.

Report Identifier	Report Name	Report Description
FBRBDBB	Budget Build Process	Builds or changes line items for a budget phase. You can create/update line items from another budget phase or from the operating ledger. You can also delete line items by account for fund type. Create the parameters that you use to execute this process on the Budget Process Control Parameters Form (FBABPRC).
FBRBDDS	Budget Distribution Summary	Shows a summary of the offline process you use to distribute amounts from the budget line item table into periodic amounts in the distribution table.
FBRFEED	Finance Budget Feed Process	Moves Position Control Budget information from the Position Control Module to the Finance Budget Tables.
FBRMCHG	Budget Mass Change Process	Changes budget line items by an amount or a percentage. Create the parameters that you use to execute this process on the Mass Budget Change Form (FBAMCHG).
FBRWKSH	Budget Worksheet Report	Displays up to three budget phases with current year and prior year budget amounts from the budget file.
FBRBDRL	Budget Roll General Accounting Program	Rolls budget amounts into the Finance ledgers. Displays parameters and totals inserted into FGBTRNI.

## **Cost Accounting**

Report Identifier	Report Name	Report Description
FCBBILL	Cost Accounting Billing Report	Prints a summary of all billing charges by project and by project rate type for the current billing cycle.
FCBEQPT	Equipment Rate Rental Calculation Report	Displays the results of the equipment rental rate calculations for all employees and equipment within an organization.

September 2014

Report Identifier	Report Name	Report Description
FCBINVT	Inventory Handling Rate Calculation Report	Displays the result of the inventory handling rate calculation for all employee and inventory items associated with an organization.
FCBLABR	Labor Rate Calculation Report	Displays results for the calculation of a direct or indirect labor rate for employees within an organization associated with classification codes. Labor rates are printed for each rate code.
FCBMATL	Material Management Rate Calculation Report	Displays the results of the material management rate calculation process for all employees and material management accounts associated with an organization.
FCRBDTR	Billing Detail Report	Prints billing details of projects by cost type and rate code.
FCRSCHD	C/A Rate Schedule Report	Prints all internal and external rates within each rate type by chart of accounts and organization code.
FCRVARA	C/A Variance Analysis Report	Displays the variance between actual and estimated costs by rate type for each employee defined to a cost accounting organization.

#### **Fixed Assets**

Report Identifier	Report Name	Report Description
FFPDEPR	Depreciation Process	Calculates depreciation for any open periods from the Last Depreciation Date up to the Depreciation Date you specify in the process parameters. A variety of parameters enable you to limit the records that will be considered for the process.
FFPOEXT	Fixed Asset Origination Tag Extraction Process	Provides a consistent method to create origination tag entries for the Asset Master record from the Procurement module and prevents origination tags from being generated before the invoice has been approved or when a transaction rolls back in posting or matching process. The report created in this process functions as an audit trail which describes the Origination tags to be created.
FFRAGRP	Fixed Asset/Asset Group Report	Selects a specified asset master record or a group of asset master records that are associated as attachments or components. This report shows all of the data elements which appear in the FFRMAST report.
FFRDTGA	Fixed Asset DTAG Aging Report	Displays the aging of Pending Dtags as of a given cutoff date. Information displays on the report by document type (Journal Voucher, Direct Cash Receipts, Stores Issues) and provides a breakdown of the account over different periods.
FFRDTGT	Fixed Asset DTAG Transaction Report	Displays Dtag transaction information as specified in the parameters of the report.
FFRMAST	Fixed Asset Master Record Report	Produces a printed record of asset master details, funding source information, capitalization information, and depreciation information appearing on the Asset Master record for selected assets.

Report Identifier	Report Name	Report Description
FFRPROC	Fixed Asset Procurement Report	Produces a single-line printed display of the procurement and payable information related to an asset master record for each selected asset.
FFRPROP	Fixed Asset Property Report	Used when taking a physical inventory of your fixed and moveable assets. It produces a single-line display of the responsible party information from the Asset Master record (FFBMAST) for each selected asset.

## **General Ledger**

Report Identifier	Report Name	Report Description
FGPDROL	Fiscal Period Document Roll	Allows completed documents that are still pending for posting in an expiring period to be rolled to a new period.
FGPGEXT	Data Extract Process	Extracts appropriate information from the General Ledger (FGBGENL) and Operating Ledger (FGBOPAL) tables to a new table (FGWREPT).
FGPOCFP	Open Close Fiscal Period	Provides the ability to open and close fiscal periods when it is not possible to do so using the Fiscal Year Maintenance Form (FTMFSYR).
FGRACCI	Account Index Report	Displays account index information by Account Index code for a specific chart of accounts.
FGRACTG	Posting Process	Generates the postings to the financial ledgers for those transactions that the system edited, completed, and approved. You may execute this process using a sleep/wake routine. This is the only program that updates finance ledgers.
FGRACTH	Account Hierarchy Report	Displays the hierarchical structure of the account codes by account types for a specific chart of accounts.

Report Identifier	Report Name	Report Description
FGRACTV	Activity Codes Report	Hardcopy report sorted by activity code. Displays activity code information within a specific chart of accounts.
FGRBAVL	Available Balance Rebuild Process	Rebuilds the Budget Availability Table when necessary. The system bases the budget rebuild process on the entire FOAPAL distribution for that budget.
FGRGRBD	Grant Rebuild Process	Rebuilds the Grant Ledger Table (FRRGRNL) when necessary. The FGRGRBD process also makes extensive updates to the database since it deletes and rebuilds the entire FRRGRNL table.
FGRBDRL	End-of-Year Budget Carry Forward Report	Hardcopy report of the remaining budget (prior year) balances that the system carries forward into the current fiscal year.
FGRBDSC	Budget Status (Current Period) Report	Hardcopy report sorted by account within organization.
FGRBLSH	Balance Sheet Report	Hardcopy report sorted by account within fund.
FGRBIEX	Bank Cash Interfund Account Balance Exception Report	Balances the cash interfund account for each bank fund to the cash interfund accounts of the funds which have a claim on the bank fund when run in summary mode. In detail mode, the report prints each document which caused the exception condition.
FGRCASH	Bank Interfund Account Control Report	Balances cash interfund account for each bank fund to the interfund accounts of the funds that have a claim on the bank fund.
FGRCOBS	Combined Balance Sheet-All Fund Types and Account Groups Report	Displays a balance sheet for all fund types and account groups.
FGRCREF	Combined Statement of Revenues, Expenditures, and Changes in Fund Balance Report	Displays fund type values for all governmental fund types and values for expendable trust funds for revenues, expenditures and changes.

Report Identifier	Report Name	Report Description
FGRCSBA	Combined Statement of Revenues, Expenditures, and Changes in Fund Balance Report	Displays budgeted and actual amounts including variances.
FGRCSRE	Combined Statement of Revenues, Expenses, and Changes in Retained Earnings/ Fund Balance Report	Displays amounts for all proprietary fund types and trust funds for a specified account level.
FGRCBSR	Combining Balance Sheets Report	Displays values for fund type and fund levels with totals for both current and prior years.
FGRCGBS	Comparative Balance Sheets Report	Displays values for a specified fund type for assets, liabilities, and fund balances within the current and prior years.
FGRCSSR	General Fund Combining Statement of Revenues, Expenditures, and Changes in Fund Balance Report	Displays values for a specified fund type and totals for both current and prior years.
FGRCSCF	Comparative Statements of Revenues, Expenditures, and Changes in Fund Balances Report	Displays values for a specified fund type for current and prior years.
FGRCGBA	Comparative Statements of Revenues, Expenditures, and Changes in Fund Balances Report — Budgeted and Actual	Reports budget and budget values as well as favorable or unfavorable variances.
FGRCHFB	Statement of Changes in Fund Balance Report	Hardcopy report sorted by fund by organization.

Report Identifier	Report Name	Report Description
FGRCHNA	Statement of Changes in Net Assets Report	In conjunction with FGRCUNA, fulfills the Financial Accounting Standards Board's requirements for a Statement of Activities. The primary purpose of this report is to provide relevant information about the effects of transactions that change the amount and nature of net assets.
FGRCLOP	Close Operating Accounts Report	Closing the operating ledger for the fiscal year.
FGRCSRP	Cash Receipts Report	Prints header and detail information for selected cash receipts. FGRCSRP can be used to print comprehensive information for one or more cash receipt based on the Document Number, Transaction Date, or Vendor Code.
FGRCTRL	GL/Subsidiary Ledger Control Report	Displays the general ledger amount and operating account ledger.
FGRCUNA	Changes in Unrestricted Net Assets Report	In conjunction with FGRCHNA, fulfills the Financial Accounting Standards Board's requirements for a Statement of Activities. The primary purpose of this report is to provide relevant information about the effects of transactions that change the amount and nature of unrestricted net assets.
FGRENRL	End-of-Year Encumbrance Carry Forward Report	Hardcopy report of the remaining open encumbrances (prior year) that the system carries forward into the current fiscal year.
FGRFAAC	Fund/Account Activity Report	Prints a balance for all funds and/or accounts, a range of funds and/or accounts, or specific funds and/or accounts within a chart of accounts and fiscal year.
FGRFBAL	Fund Balance Account Report	Hardcopy output of the fund balance account information maintained using the Fund Balance Account Maintenance Form (FTMFBAL).
FGRFITD	Inception to Date Activity Report	Hardcopy output including inception to date activity for account codes within funds.

Report Identifier	Report Name	Report Description
FGRFNDH	Fund Hierarchy Report	Displays the hierarchical structure of the fund code within a fund type for a specified chart of accounts.
FGRFPSN	Statement of Financial Position Report	Provides relevant information about an organization's assets, liabilities, and net assets for a specific date.
FGRGLRL	Balance Forward Processing Report	Closes all prior year control account balances into the fund balance. Creates open balances in the current fiscal year (accounting period 01). Opens the accrual period in the prior fiscal year.
FGRGLTA	G/L Transaction Activity Report	Details accounting transaction activity and displays beginning and ending account balances for the specified period. This report sorts by account within fund.
FGRIDOC	Incomplete Document Listing Report	Provides the ability to print information about incomplete documents. This report provides a simple method of identifying incomplete documents, so that the appropriate action may be taken to complete these documents.
FGRJVLR	Journal Voucher Listing Report	Prints header and detail information for selected pending journal vouchers. This report can be used to print comprehensive information for one or more pending journal vouchers based on the journal voucher number, transaction date, status, journal type, or user ID.
FGRLOCH	Location Hierarchy Report	Displays the hierarchical relationship within the location code.
FGRODTA	Organization Detail Activity Report	Displays expense budget, and encumbrance activity for the specified period. This report sorts by account within organization.

Report Identifier	Report Name	Report Description
FGROPNE	Open Encumbrances Report	Prints header information and remaining encumbered or reserved balance amounts for selected purchase orders, requisitions, and general encumbrances. Only records for documents that are open, completed, approved, and posted are included in the report.
FGRORGH	Organization Hierarchy Report	Displays the hierarchical relationship within the organization code structure.
FGRPDTA	Program Detail Activity Report	Displays expense, budget, and encumbrance activity and shows beginning and ending balances for the specified period. This report sorts by program within organization.
FGRPRAP	Pro Rata Allocation Process	Prepares allocations for existing transactions based on user-defined parameters. The process also creates totals for all of the eligible transactions and, if requested, produces an Allocation Control Report.
FGRPRAR	Pro Rata Allocation Report	Allows the user to re-create a list of the source transactions for any allocation transactions produced by the Allocation Process.
FGRPRGH	Program Hierarchy Report	Displays the hierarchical relationship within the program code.
FGRREOB	Statement of Revenues, Expenditures, Other Changes Report	Compares actual activity for revenues and expenditures to the budgeted activity to date.
FGRREOC	Statement of Revenues, Expenditures, Other Changes Report	Compares actual activity for revenues and expenditures for the budgeted activity for the prior fiscal year.
FGRTAXR	Statement of Taxes and Rebates Report	Prints tax and rebate information related to invoices and direct cash receipts in Summary, Detail, or Both modes.
FGRTBAL	Trial Balance Report	Prints a trial balance for all funds, a range of funds, or specific funds within a chart of account and fiscal year.

Report Identifier	Report Name	Report Description
FGRTBEX	Trial Balance Exception Report	Analyzes funds for potential out of balance conditions. When run in summary mode, it displays any out of balance funds for each Chart of Accounts. In detail mode, the report provides a list of all documents that are associated with that out of balance fund.
FGRTOFR	Due To/Due From Control Report	Displays the fund code, description, due to balance, due from balance and the difference for a specific chart of account and fiscal year.
FGRTRNH	Daily Transaction Control Report	Displays the daily transaction information by activity date, document type, and number.
FGRTRNI	Transaction Interface Process	Processes records in the Transaction Input Table (FGBTRNI). The FGRTRNI process performs data validation and internally documents transactions that have failed budget edits and NSF checking.
FGRTRNR	Transaction Error Report	Displays the error messages for those transactions that do not successfully pass edits or the available balance processing in the Transaction Interface Process (FGRTRNI).
FORAPPL	Approval Process	Interrogates the records in the Approvals in Process Table (FOBAINP), as well as the queue and routing information, and sends the entry for the document to the next approver.

## **Purchasing and Procurement**

Report Identifier	Report Name	Report Description
FAPCARD	Purchase Card Transactions Process	Process (a) performs edits on FATCARD data; (b) generates a Liability Journal Voucher; (c) populates the PCard Invoice tables; and (d) sends notification to account managers
FAPINVT	Invoice Feed Process	Moves invoice transactions directly from the PCard Transaction Interface tables into the invoice tables.

Report Identifier	Report Name	Report Description
FARCHKR	Check Register Report	Shows check register report sorted by check number.
FARCSHR	Cash Requirements Report	Displays predicted cash requirements for the installation's banks based on accounts payable data. It is sorted by bank.
FARVALP	Vendor Alphabetical Listing Report	Lists vendors in alphabetical order.
FARVHST	Vendor History Report	Displays payment activity data for a vendor.
FARVNUM	Vendor Numerical Listing Report	Lists vendors in numerical order by ID number.
FPABIDD	Bid Print Report	Prints either a specific bid or all bids which have been approved but have never been printed.
FPACORD	Purchase/Change Order Print Report	Prints a specific purchase order which has a change order associated with it or may print all of the change orders which are completed, approved, posted but not yet printed.
FPAPORD	Purchase/Change Order Print Report	Prints a specific Purchase/Change Order or all Orders which have been approved but have never been printed.
FPARQST	Requisition Print Report	Prints a specific requisition or all requisitions which have been approved but have never been printed.
FPPPOBC	Purchase Order Batch Close Process	Closes all purchase orders with encumbrance balance less than or equal to user defined amount. Liquidates encumbrance balance and sets all required system status values as necessary. Produces an audit report detailing the documents affected by the process.
FPRBEVL	Bid Evaluation Report	Summarizes bid data for comparison of vendor unit pricing on a particular bid.
FPRDELV	Delivery Log Report	Displays delivery and routing of received goods.

Report Identifier	Report Name	Report Description
FPROPNP	Open Purchase Orders Report	Shows open purchase orders sorted by purchase order number on a specified date.
FPROPNR	Open Request Report	Shows open requisitions sorted by requisition number as of a particular date.
FPRRCDL	Receiving/Delivery Report	Report can be used to determine the status of received and delivered commodities versus ordered ones.
FPRRCST	PO Receiving Status Report	Displays purchase orders with packing slips that have not yet been invoiced.
FPRVCAT	Vendor Products Catalog Report	Displays vendor numbers, names, and prices based on the installation's purchasing history. It is sorted by commodity.
FPRVVOL	Vendor Volumes Report	Displays commodity purchase history by vendor.

## **Stores Inventory**

Report Identifier	Report Name	Report Description
FSRDTLG	Stores Daily Transaction Listing Report	Shows all activity that changed overall balances of consumable stock in the Stores Inventory System for a defined date range. The system lists all receipts of stock first. Issues list afterward, with the 'issued to' department or organization.
FSRINVL	Stores Inventory Listing Report	Contains on-hand commodity quantities by location. Depending upon the parameter values, the report may print: all commodities for all locations sorted by commodity and location, one commodity across all locations, one commodity in a subset of location or all commodities for one location.

Report Identifier	Report Name	Report Description
FSRISST	Issue Ticket Report	When stock is issued from the stockroom, generate this report to accompany the goods. The Issue Ticket Report contains a listing of the commodity code, description, quantity, quantity remaining to be issued (backordered), and location. Use this report to print return issue documents. Generally, you print this report after the issue/return has been created and completed online.
FSRLWSR	Stores Low Stock Report	Lists all stock items whose on-hand quantity plus on order quantities has fallen below the pre-defined reorder point quantity, or have fallen below a range defined as a percentage of the reorder point quantity.
FSROPNR	Open Stores Requests Report	Displays status of requests for stock items, goods, and services that are not fully satisfied. Open requests display as of a specific date and are sorted by requisition number. The system displays all open requisitions unless you use the optional parameters to selectively define the report listing.
FSROUTP	Stores Outstanding Purchase Orders Report	Lists all open purchase order items for consumable stock items. You may select one commodity code on which to report or report all commodities.
FSRPHYR	Physical Inventory Process Report	Automatically marks, as reconciled, all those items whose system inventory count does not vary from the physical inventory count by an amount greater than the system defined tolerance for that commodity. Before running this process, assign all stock commodities an ABC classification on the Stores Inventory Maintenance Form (FTMINVM). Assign a tolerance percentage to the ABC classifications using the System Data Maintenance Form (FTMSDAT).

Report Identifier	Report Name	Report Description
FSRPICK	Pick List	Lists all open stores requests by a user defined commodity, location or commodity/location combination. Use this report after creating a stores request and print this report just before the issue. This report enables warehouse personnel to pick items to satisfy a request.
FSRPIDR	Physical Inventory Discrepancy Report	Lists all items whose system inventory count does not match the physical inventory count. The system automatically performs a wildcard search using the sublocation, if entered. If only the primary location (warehouse) is entered, all discrepancies within that warehouse are reported. If a primary location and sublocation are entered, all locations matching the primary location and sublocation (rack/shelf/bin) are returned.
FSRPIWS	Physical Inventory Worksheet	Lists all items by specific location(s). The purpose of the report is to ease the recording of count quantities. All locations print that have not yet been counted or reconciled based upon the values you enter. The system automatically performs a wildcard search using the sublocation, if entered. If only the primary location is entered, all discrepancies within that primary location (warehouse) are reported. If a primary location and sublocation (rack/ shelf/bin) are entered, all locations matching these parameters are reported.
FSRPUTL	Put List	Lists all items from a packing list and their default location in order for warehouse personnel to determine where to put the incoming stores. You may sort this report by receiver document number, packing list, or by commodity code. The system lists all stock locations that may contain the commodity.

Report Identifier	Report Name	Report Description
FSRSTEX	Dock to Stock Exceptions Report	Lists all items for a specific primary <i>ship to</i> location, that have been received by the central receiving process but have not yet been introduced into the Stores Inventory System. The receiving information that prints is: accepted quantity, remaining dock quantity, receipt date, receiver document number and packing slip number, purchase order number, and the order amount. The system scans the central receiving document for all stock commodities that have not been transferred over to the Stores warehouses.
FSRSUPC	Supply Catalog Report	Lists all stock commodities that are currently active sorted by commodity code. Each commodity is checked to be sure that it is still active and has not terminated.

#### **Financial Utilities**

Report Identifier	Report Name	Report Description
FUPLOAD	Finance Upload to GURFEED Process	Evaluates input data based on parameters entered to load internal vendor data to GURFEED.
FURFEED	Finance Feed Sweep Process	Shows the output of the Finance Feed Sweep Process.
FURAPAY	Student Refund Interface Process	Draws refund check transactions from the Accounting Feed Accounts Payable Table (GURAPAY), and creates invoices which are ready to post.

#### **Position Control**

Report Identifier	Report Name	Report Description
NBPBROL	Budget Roll Process Report	Executes budget roll (including fringe benefits) from one fiscal year to another. The system posts results to the Position Totals Block of the Position Form (NBAPOSN).
NBPBUDM	Budget Maintenance Process	Spreads budget amounts to position labor distributions.
NBPMASS	Mass Salary Table Update Report	Calculates contract value for the fiscal year you enter. Calculates automatic step increases. Updates groups of Table/Grade combinations by amount or percent, and updates job records with new table/grade combination.
NBRBWRK	Budget Worksheet Report	Displays budget phases with current year and prior year budget amounts from the budget file. Banner Finance sorts this report by organization, fund, program, activity, location, and account.
NBRPCLS	Position Class Listing Report	Lists defined position classes and salary guidelines.
NBRPINC	Position Class Incumbent Report	Lists incumbents of positions in each position class.
NBRPOSN	Position Report	Lists active, frozen, and/or cancelled positions for a specified date range.
NBRPSTA	Position Status Exception Report	Lists exception status positions (i.e., over budget, vacant, canceled, frozen, underencumbered, or over-filled).
NHPFIN1	Finance Interface Extract Report	Extracts data for Finance System interface and updates the position totals with encumbered amounts.
NHPFIN2	Finance Interface Report	Shows information which you extracted and passed to the Finance System.
NHRBDST	Budget Distribution Report	Shows budgetary information for selected FOAPALs.

Report Identifier	Report Name	Report Description
NHRDIST	Organization Distribution Payroll Distribution Report	Shows summary and detail reports.
NHRECRT	Effort Certification Report	Shows FOAPAL information for specified grants or funds.
NHREDST	Employee Distributions Report	Shows the sum of selected earnings and/or benefits distributed to each FOAPAL for each employee's position. Also shows the percent of the selected earnings and/or benefits represented by the reported sum, and the percent of the employee's total earnings and/or benefits represented by the sum of all earnings and/or benefits distributed to the FOAPAL.
NHRSDST	Employee Payroll Summary by Organization Report	Shows up to eight columns of earnings and benefit data for selected FOAPAL distributions. Each column can contain hours or amounts for a specific earning, benefit, or charge back, or for all earnings and/or benefits.

#### **Archive/Purge**

Report Identifier	Report Name	Report Description
FOPARCP	Archive/Purge Process	Method by which data is copied from the production current tables into another table structure. Data which resides on the archive tables can be purged when it is outdated or no longer needed.
		The Purge process deletes data from the production current or production archive tables. A database indicator is included among the parameters to determine which database will be purged.
FOPARCR	Restore Process	Reestablishes previously archived data into the production current tables. The restored data will be removed from the production archive tables as part of the Restore Process. Purged data cannot be restored.

#### **Research Accounting**

Report Identifier	Report Name	Report Description
FRPMESG	Events Messaging Process	Provides the ability to monitor events associated with personnel with the Research Accounting module.
FRRABUD	Agency Budget Report	Prints the proposal budget so that it can be forwarded to the agency. The report can be run in either Audit or Update mode.
FRRBUDG	Grant Budget Report	Displays a specific budget, or a series of budget iterations that have been created through the Grant Budget Form for a specific grant. You will see a breakdown of grant budget information by fund, organization, program, activity, and location for each account code budgeted. The report will also display the amounts for indirect costs and cost sharing.

Report		
Identifier	Report Name	Report Description
FRREVNG	Grant Events Report	Displays events or reminders associated to a grant. You may choose to view events for a specific personnel indicator; for a specific time period; or for a range of grants, a specific grant or a selection of grants.
FRREVNP	Proposal Events Report	Displays events or reminders associated to a proposal. You may choose to view events for a specific personnel indicator; for a specific time period; or for a range of proposals, a specific proposal, or a selection of proposals.
FRRGBFY	Grant Budget Status Fiscal Year Report	Reflects grant activity within a specific fiscal year.
FRRGITD	Grant Inception to Date Report	Provides grant information from the Grant Ledger in place of the Operating Ledger. It will prompt for a Grant Code to display Operating account activity in hardcopy format. The report has been enhanced to include trail-in and trail-out activity.
FRRGRNT	Deferred Grant Process	Allows for Grant calculations of indirect cost, cost share, and revenue recognition to be performed on a user-defined interval. Also writes the detailed transactions to the history table as it processes them.
FRRINDC	Grant Indirect Cost Report	Provides the total expenditures for each grant by the FOAPAL. The report lists the direct expenses, then the overhead (indirect cost) and then the total cost.

Report Identifier	Report Name	Report Description
FRRBILL	Research Accounting Billing Process	Produce bills to the sponsoring agency. You can run this process for a specific bill format code and for a specific billing period end date. All the unbilled transactions up to the billing period end date will be selected for each grant or payment management system code and will be billed to the agency. This process can be run in audit mode or update mode. When you run this process in update mode, this process creates a document and sends it to posting. All the unbilled transactions will be updated to billed. This process also inserts rows into the appropriate billing tables based on the format code
FRRBREV	Research Accounting Billing Reversal Process	Reverse the bill that was generated by the billing process (FRRBILL). This process reverses what the billing process has done. You can run this process for a specific bill invoice number. This process sends a document to posting. This process also updates the transaction to unbilled from billed so that you can run the billing process again. This process also update bill invoice adjusted sequence number. You cannot run reversal process for an invoice for which a payment has been applied. You must unapply the payment and then run the reversal process.
FRRGRPT	Research Accounting Report Process	Generate reports to the agency. You can run this process by grant or by payment management system code for a specific format code and report end date. This process identifies all the activity for that specific parameters entered and will insert data into the appropriate report tables. This process will not update ledgers.

Report Identifier	Report Name	Report Description
FRRBEXC	Billing Exception Report	Provides a list of all exceptions that the billing process has identified when it tried to process a bill. You can run this report by grant or by Payment management system code and for a specific billing period end date. This report is sorted by grant. Ideally you run the billing process (FRRBILL) in audit mode and run this report for list of any exceptions against the data that was selected by the billing process for that run.
FRRINVS	Grant Billing Preview Report	Provides basic information like- billing period start date, end date, cumulative billed amount, retainage amount and payment withholding amount. You can run this report for a specific date and this process will provide information for a grant sorted by bill format codes. You can run this report before running the billing process (FRRBILL) to determine what data would be selected by the billing process when run for the same date
FRRBDEX	Billing Detail Exception Report	Provides the exceptions between the transaction detail table and the billing detail table. It will provide the list of all the documents that exist in FGBTRND table and that do not exist in FRRBDET table. This reported is sorted by FOAPAL with in a grant.
FRRCNSF	Canadian Standard Report Form	Prints grant billing information in a format customized for Canadian institutions. To run this report, Oracle Reports must be installed on your computer. This report will not run from a web-enabled form. You can run this report for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single report for all the grants linked to the payment management system code or multiple reports for each grant within that payment management system code. You can run this report for a specific period end date.

Report Identifier	Report Name	Report Description
FRRFEXC	Fund Exception Report	Lists all the funds that are linked to the grant but does not have an accrual account and revenue account fields populated on the FTMFUND record. Billing module design is based on the fact that the revenue recognition occurs as soon the grant expense is incurred. If these fields are not populated on the FTMFUND record, expenditures against the grant will not be inserted into the billing detail table (FRRBDET) and as a result of that you cannot use the billing process to bill the agency
FRRGENR	Generic Report Form	Prints grant billing information in a format customized by your institution on the Billing/Report Format Maintenance Form (FTMBFRM). To run this report, Oracle Reports must be installed on your computer. This report will not run from a web-enabled form. You can run this report for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single report for all the grants linked to the payment management system code or multiple reports for each grant within that payment management system code. You can run this report for a specific period end date.
FRRGRNP	Deferred Grant Purge	Purges the data specified within the date parms from the grant history that is maintained during defer grant calculation process.
FRR134B	Standard 1034 Billing Form	Prints a bill in the standard 1034 format. To run this bill, Oracle Reports must be installed on your computer. This bill will not run from a web-enabled form. You can run this bill for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single bill for all the grants linked to the payment management system code or multiple bills for each grant within that payment management system code. You can run this bill for a specific period end date or a specific bill invoice number

Report Identifier	Report Name	Report Description
FRR269R	Standard 269 Report Form	Prints grant billing information in the standard 269 format. To run this report, Oracle Reports must be installed on your computer. This report will not run from a web-enabled form. You can run this report for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single report for all the grants linked to the payment management system code or multiple reports for each grant within that payment management system code. You can run this report for a specific period end date
FRR270B	Standard 270 Billing Form	Prints a bill in the standard 270 format. To run this bill, Oracle Reports must be installed on your computer. This bill will not run from a web-enabled form. You can run this bill for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single bill for all the grants linked to the payment management system code or multiple bills for each grant within that payment management system code. You can run this bills for a specific period end date or for a specific bill invoice number.
FRR272B	Standard 272 Billing Form	Prints a bill in the standard 272 format. To run this bill, Oracle Reports must be installed on your computer. This bill will not run from a web-enabled form.
		You can run this bill for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single bill for all the grants linked to the payment management system code or multiple bills for each grant within that payment management system code. You can run this bill for a specific period end date or for a specific bill invoice number.

Report Identifier	Report Name	Report Description
FRR272R	Standard 272 Report Form	Prints grant billing information in the standard 272 format. To run this report, Oracle Reports must be installed on your computer. This report will not run from a web-enabled form.
		You can run this report for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single report for all the grants linked to the payment management system code or multiple reports for each grant within that payment management system code. You can run this report for a specific period end date.
FRRGENB	Generic Bill Form	Prints bills in a format customized by your institution on the Billing/Report Format Maintenance Form (FTMBFRM). To run this bill, Oracle Reports must be installed on your computer. This bill will not run from a webenabled form. You can run this bill for a specific Payment management system code or you can run for a specific grant or multiple grants. You can produce one single bill for all the grants linked to the payment management system code or multiple bills for each grant within that payment management system code. You can run this bill for a specific period end date.
FGRGLEX	Grant Ledger Exception Report	Prints a list of all transactions that exist in the Transaction Detail Table (FGBTRND), but not the Grant Ledger (FRRGRNL). This report prints by grant and with in each grant for a specific FOAPAL. This report also prints exception within each bucket of the grant ledger.
TRRAGES	Grant Aging Analysis Report	Provides aging of the grant receivables. You can run this report for aging of billed receivables and aging of unbilled receivables. You can print 5 different aging buckets

Report Identifier	Report Name	Report Description
TRRAPPL	Application of Payment Process	Applies payments to the charges. This process has no parameters. It applies payments to charges by grant. If a Tpay number or invoice paid number is entered by the user in the Payments Entry Form (FRAAREV), this process first applies the payment to that specific charge transaction number or for that specific bill invoice number. If these two fields are not entered by the user, then the process will apply the payment against a grant to the oldest charge
TRRRCON	Grant Reconciliation Report	Reconciles data between the Accounts Receivable module and the Finance module for Grant Billing transactions only. You can reconcile by chart or by grant or by payment management system code. You can also print just the grants that are out of balance or just the Payment management system codes that are out of balance.  This report reconciles between billed summary
		and billed detail, Payments in AR against payments in General ledger and billed charges in AR against charges in the general ledger.
TRRUNAP	Unapplication of Payments Process	Unapplies payments that have been incorrectly applied to a charge. After you run this process, you can apply the payment to the appropriate charge
TRRUNPL	Unapplied Payments Listing	Lists all payments that have not been applied to charges. It also prints the fund codes the exact payment was posted to. This report is sorted by grant.
TRRCOLL	Collections Report	Prints information about collection efforts that have been entered on the Grant Billing Collections Form (TRACOLL). You can run this report by status i.e., if the bill is open or closed or by user ID or by grant or by agency.

#### **Endowment Management**

Report Identifier	Report Name	Report Description
FNPGAIN	Distribution of Gains/ Losses Process	Used to distribute realized gains and losses, unrealized gains and losses, and spending formula variance to all endowed funds in a unitized pool.
FNPSPND	Distribution of Spendable Income Process	Used to distribute spendable income to all endowed funds in a unitized pool.
FNPUNTZ	Unitization Process	Used to unitize a pool of endowment or similar funds.
FNRPRNC	Principal Fund Activity Report	Shows year-to-date information about endowed funds for the beginning of a fiscal year to the date that you enter in the <b>As of Date</b> parameter.
FNRSPNC	Spendable Endowment Fund History Report	Shows information about spendable funds. Spendable funds are sorted by financial manager. Within each financial manager, they are sorted by fund code.
FNRHIST	Endowment Fund History Report	Shows information about endowed funds for each fiscal period from the inception date of the fund to the current date. Displays the net change, the cumulative number of units, and the book value for each fund by unitization period.

#### **Grant Interface**

Report Identifier	Report Name	Report Description
FRPBINF	Grant Budget Interface Process	Processes budget data from FRCBUDD and FRCBUDH into the Banner baseline tables FRBBUDG and FRRBUDG
FRPGINF	Grant Interface Process	Processes information loaded from FRCBFIX, FRCEVNG, FRCGLOC, FRCGRNT, FRCGRPI, and FRCGUSN into the Banner baseline tables FRRBFIX, FRBEVNG, FRRGLOC, FRBGRNT, FRRGRPI, and FRRGUSN
FRRTRNR	Grant/Budget Error Printing Process	Produces an error report, based on the contents of FRCTRNR (collector table).

#### **Miscellaneous**

Report Identifier	Report Name	Report Description
FEPOEXT	EDI Extract Process	Extracts those Purchase Order and Purchase Order Change documents that are to be sent via EDI.

#### **Comprehensive Annual Financial Reports (CAFR)**

Banner Finance contains nine Comprehensive Annual Financial Reports identified in the following list. Following this list are required table entries for each report.

- 1. General Fund Combining Balance Sheets Report (FGRCBSR)
- **2.** Comparative Statements of Revenues, Expenditures and Changes in Fund Balances Report (FGRCGBA)
- **3.** Comparative Balance Sheets (FGRCGBS)
- **4.** Combined Balance Sheet All Fund Types and Account Groups Report (FGRCOBS)
- **5.** Combined Statement of Revenues, Expenditures and Changes in Fund Balances Report (FGRCREF)

- **6.** Combined Statement of Revenue, Expenditures and Changes in Fund Balances Budget/Actual Report (FGRCSBA)
- **7.** Special Revenue Funds Comparative Statement of Revenues, Expenditures and Changes in Fund Balances Report (FGRCSCF)
- **8.** Combined Statement of Revenue, Expenses and Changes in Retained Earnings/Fund Balances Report (FGRCSRE)
- **9.** General Fund Combing Statement of Revenue, Expenditures and Changes in Fund Balances Report (FGRCSSR)

A record must exist in FTVSDAT for every internal fund type code and fund type group code.

Table Entry	Values
FTVSDAT_DATA	Valid codes are 01, 02, 03, or 04
FTVSDAT_COAS_CODE	Chart of Accounts Code
FTVSDAT_SDAT_CODE_ENTITY	FTVFTYP
FTVSDAT_SDAT_CODE_ATTR	INTERNAL_FTYP_CODE
FTVSDAT_SDAT_CODE_OPT_1	Internal fund type code associated with the appropriate group

Fund type group code descriptions are as follows.

- Fund Type Group Code 01 defines Governmental Funds.
- Fund Type Group Code 02 defines Proprietary Fund Types.
- Fund Type Group Code 03 defines Fiduciary Fund Types.
- Fund Type Group Code 04 defines Account Groups.

### Note

Combined Statement of Revenues, Expenditures and Changes in Fund Balances Report (FGRCREF) and Combined Statement of Revenue, Expenditures and Changes in Fund Balances - Budget/Actual Report (FGRCSBA) only report on fund type group code 01.

The Combined Statement of Revenue, Expenses and Changes in Retained Earnings/Fund Balances Report (FGRCSRE) only reports on fund type group codes 02 and 03.

Specify the following additional required entries for the Combined Statement of Revenue, Expenses and Changes in Retained Earnings/Fund Balances Report (FGRCSRE).

A record must exist in FTVSDAT for every internal fund type code associated with the following categories.

• I - For Non-Expendable Trust fund records, FTVSDAT must contain the following entries:

Table Entry	Values
FTVSDAT_COAS_CODE	Chart of Accounts Code
FTVSDAT_SDAT_CODE_ENTITY	FTVFUND
FTVSDAT_SDAT_CODE_ATTR	NON-EXPENDABLE TRUST
FTVSDAT_DATA	Fund code for non-expendable trust for all fund levels

• II - To select Pension Trust fund(s), same as for non-expendable trust with the following exceptions:

Table Entry	Values
FTVSDAT_SDAT_CODE_ATTR	PENSION TRUST
FTVSDAT_DATA	Fund code for pension trust for all fund levels

• III - For Non-Operating Accounts, same as for non-expendable trust with the following exceptions:

Table Entry	Values
FTVSDAT_SDAT_CODE_ENTITY	FTVACCT
FTVSDAT_SDAT_CODE_ATTR	NON-OPERATING ACCOUNT
FTVSDAT_SDAT_CODE_OPT_1	Internal account code for non-operating
	accounts

• IV - For Extraordinary Gain (Loss) Accounts, same as the non-operating accounts with the following exceptions:

Table Entry	Values
FTVSDAT_SDAT_CODE_ATTR	EXTRAORDINARY GAIN (LOSS) ACCOUNT
FTVSDAT_SDAT_CODE_OPT_1	Internal account code for extraordinary gain (loss) account

Specify the following *additional* required entries for the Combined Statement of Revenues, Expenditures and Changes in Fund Balances Report (FGRCREF).

A record must exist in FTVSDAT for you to define Expendable Trust Funds.

Table Entry	Values
FTVSDAT_COAS_CODE	Chart of Accounts Code
FTVSDAT_SDAT_CODE_ENTITY	FTVFUND

Table Entry	Values
FTVSDAT_SDAT_CODE_ATTR	EXPENDABLE TRUST
FTVSDAT_DATA	Fund code to include under this category, for example, FGBOPAL_FUND_CODE

## **Processes**

## **FGBTRND Performance Improvements**

### Alternate Indexes

Three separate indexes are provided that can improve performance. Which index you use depends on how you access the data for the Operating Ledger transactions on the Transaction History Detail Table (FGBTRND). The scripts which create these indexes are as follows: fgbtrnd2.sql, fgbtrnd3.sql, and fgbtrnd4.sql.

- The fgbtrnd2.sql defines an account index for the Transaction History Detail Table (FGBTRND). The Account Index is the permanent index that Banner Finance maintains. Use this index if when you access the Operating Ledger data on FGBTRND, you enter an account code as a specific request (versus relative). If this is not the case at your installation, you can use two alternate indexes.
- The fgbtrnd3.sql defines the first alternate index: an organization index. Use this index if you access the Operating Ledger data on FGBTRND, you enter an organization code, either with a relative account or without an account.
- The fgbtrnd4.sql defines the second alternate index: a fund index. Use this index if any of the following conditions exist.
  - When you access the Operating Ledger data on FGBTRND, you enter a fund code alone.
  - When you access the Operating Ledger data on FGBTRND, you enter a fund code with or without an organization code.
  - When you access the Operating Ledger data on FGBTRND, you enter a fund code with or without an organization code, and with or without an account code.

## **Choosing an Index**

It requires a great deal of thought to determine which index to use in order to improve performance. Following are some hints.

 Always choose an index that meets the majority of your requests. No one index meets the criteria for every access you can make.

- Choose an index that eliminates the largest number of records when you access the table. For example, if you normally access data with fund and organization, and there are typically less records on TRND per organization than per fund, choose the organization index. If there is a toss-up between the fund and the organization index, do different trials to monitor the response times for accesses to FGBTRND. Change the index that you initially define, if you desire.
- Learn in detail how to access the information. You can increase your effectiveness just knowing how to get the data you need. Therefore, once you add an index to the table, learn how to get the most from your queries.

### For example:

- What components (fund, organization, account, relative or specific) should you always value for the index to provide optimum performance?
- What can you expect when certain components are valued or left blank?
- What happens when you ask for information for the fund with the largest volume of data?

Notice that, in the .sql scripts, Banner Finance always drops the account index before it adds either the organization index or the fund index. This limits the number of similar indexes on the table, which in turn improves response time by not having to maintain indexes that ORACLE may never use.



When Oracle decides between the use of two possible indexes, it always uses the one that you create most recently.

### Other Indexes for FGBTRND

There is a separate index that you use specifically for the FGIGLAC query. In addition, there is an index specifically for the FGRODTA report and an index to look specifically at data for encumbrances. The indexes mentioned above do not affect these indexes.

All of the indexes include a column, FGBTRND\_LEDGER\_IND. This column effectively splits the TRND transaction data into financial ledger components: G for General Ledger data, G for Operating Ledger data, and G for Encumbrance data. This improves the response time for large volume queries in which the data crosses financial ledger component (for example, the fund code).

### **FGRBAVL Rebuild Process**

This process is run on request and rebuilds the Budget Availability Ledger Table (FGBBAVL) when necessary. The budget rebuild process is based on the entire FOAPAL distribution for that budget. FGRBAVL needs to be run only if the rules controlling the available balance checking process are changed.

The Available Balance Rebuild Process (FGRBAVL) requires exclusive access to the Budget Availability Ledger Table (FGBBAVL). The FGRBAVL process also makes extensive updates to the database since it deletes and rebuilds the entire FGBBAVL table.



If you run it with only a single Commit command at the end of the process, you may need an excessive number of rollback segments. If you use multiple commits, there is a risk that another available balance related process may update the table before you can re-lock the table.

To alleviate this problem, the Available Balance Rebuild Process (FGRBAVL) uses two temporary public synonyms called "FGBBAVL\_WORK" and "FGRBAKO\_WORK". These synonyms are not referenced in any other Banner Finance component. Using this method, FGRBAVL can perform multiple commits without the risk of other processes making updates. During the period this process runs, no other Finance process or form which references FGBBAVL can run since all Banner Finance components access the FGBBAVL and FGRBAKO tables using the public synonyms "FGBBAVL" and "FGRBAKO". Because of this restriction, as well as the amount of processing that this process requires, you should always run FGRBAVL during off hours when no other Finance process occurs.

Finance updates the FGBBAVL table during the normal posting of all accounting transactions by the Posting Process (FGRACTG). You only need to run FGRBAVL if the rules that control the available balance checking process change.

Before running FGRBAVL, export the FGBBAVL and FGRBAKO tables. This creates a backup of these tables in case the process terminates abnormally.



### Marning

Remember that you cannot execute any other process or forms which use FGBBAVL or FGRBAKO while you run FGRBAVL. If you do, an Oracle error displays stating that the Table or View does not exist.

If the process terminates abnormally, import data from the export tables. Run FGRBAVL again.

## **Running the FGRBAVL Rebuild Process**

### Drop Public Synonyms FGBBAVL and FGRBAKO (Part A)

Drop the public synonym FGBBAVL and create a public synonym FGBBAVL WORK, and drop the public synonym FGRBAKO and create a public synonym FGRBAKO\_WORK by executing the script fimsbvl1.sql, located in \$BANNER\_HOME/ finance/plus. To do this, invoke SQL\*Plus and run the procedure:

sqlplus fimsmgr/password start fimsbvl1

### Run the FGRBAVL Rebuild Process (Part B)

Execute the C program FGRBAVL from the command line and respond to the on-screen messages and prompts. For additional information about parameters, refer to the documentation for FGRBAVL in "Chapter 4: Reports and Processes" of the Banner Finance User Guide.

Locate the program in the directory \$BANNER HOME/general/exe.

When entering parameters for the available balance rebuild process, be aware of the following.

- When using a fund or fund type parameter, the fund or funds with that fund type should not be linked to other funds for budgeting purposes. That is, the funds should not have a budget pool fund or combination budget control with other funds and organizations.
- If budgeting is done on a pool budget fund or hierarchical budget basis, only the chart and fiscal year parameters should be entered.

### Re-create the Public Synonyms FGBBAVL and FGRBAKO (Part C)

Drop the public synonyms FGBBAVL WORK and FGRBAKO WORK and re-create the original public synonyms by executing the script FIMSBVL2.SQL located in \$BANNER\_HOME/finance/plus. To do this, invoke SQL\*Plus and run the procedure.

```
sqlplus fimsmgr/password
start fimsbvl2
```

### Compile Objects in an Invalid State (Part D)

Run the guraltrb.sql utility script to compile all BANINST1-owned functions, views, packages and procedures that are in an invalid state.



### Marning

Any time a database object is modified (such as renaming tables FGRBAVL and FGRBAKO, other objects that have interaction with the changed object are marked as Invalid by the database system. You must resolve all such errors.

To compile objects which are currently in an invalid state perform the following steps.

1. Invoke SQL\*Plus and run the procedure.

```
sqlplus general/password
start guraltrb
```

2. At this point you may be prompted to enter a value for splpref, the spool preference variable. At the prompt **Enter value for splpref**, simply press **Enter** without entering a value. If you do enter a value, the system either appends the value to the front of the file names shown below, or uses the value as a path to write those files if the value is a valid path.

```
galtrit.sql
glisaltr listing
```

**3.** You may need to repeat this process several times until all dependencies are validated.



The FGRBAVL rebuild process is now complete.

### Compilation of FGRBAVL

The source code for the Available Balance Rebuild program is composed of two C programs: fgrbavl.pc linked with fgpabal.pc.

If the FGRBAVL process needs to be compiled, there is a mass generation script provided with Banner Finance. The script (fimcmplc.shl) is located in \$BANNER\_HOME/finance/misc. This script compiles all Finance C programs in a UNIX environment. At the bottom of the script are statements necessary to compile the Available Balance Rebuild Process. They are described below.

### **UNIX**

```
#Compile and link BANNER Finance Available Balance Rebuild
Process
(FGRBAVL)
#
# 
# Only those objects that have changed have to compiled. The
# LAST Line should always be included to re-link the objects.
#
# 
make -f $BANNER_HOME/general/c/sctproc.mk
CHECKOPT="sqlcheck=full
userid=baninst1/u_pick_it" fgpabal.o
# 
make -f $BANNER_HOME/general/c/sctproc.mk fgrbavl
LINKOBJS="$BANNER_HOME/general/exe/fqpabal.o"
```

### **FGRGRBD Grant Rebuild Process**

This process is run on request and rebuilds the Grant Ledger Table (FRRGRNL) when necessary.

The Grant Rebuild Process (FGRGRBD) requires exclusive access to the Grant Ledger Table (FRRGRNL). The FGRGRBD process also makes extensive updates to the database since it deletes and rebuilds the entire FRRGRNL table.



If you run it with only a single Commit command at the end of the process, you may need an excessive number of rollback segments. If you use multiple commits, there is a risk that another grant related process may update the table before you can re-lock the table.

To alleviate this problem, the Grant Rebuild Process (FGRGRBD) uses a temporary public synonym called "FRRGRNL\_WORK". This public synonym name is not referenced in any other Banner Finance Component. Using this method, FGRGRBD can perform multiple commits without the risk of other processes making updates. During the period this process runs, no other Banner Finance process or form which references FRRGRNL can run since all Banner Finance components access the FRRGRNL table using the original public synonym "FRRGRNL". Because of this restriction, as well as the amount of processing that this process requires, you should always run FGRGRBD during off hours when no other Banner Finance process occurs.

Before running FGRGRBD, export the FRRGRNL table. This creates a backup of the table in case the process terminates abnormally.



### Marning

Remember that you cannot execute any other process or forms which use the table FRRGRNL while you run FGRGRBD. If you do, an Oracle error displays stating that the Table or View does not exist.

If the process terminates abnormally, import data from the export tables. Run FGRGRBD again.

## Running the FGRGRBD Rebuild Process

### Drop Public Synonym FRRGRNL (Part A)

Drop the public synonym FRRGRNL and create the public synonym FRRGRNL\_WORK by executing the script FGRNBLD1.SQL, located in \$BANNER\_HOME/finance/plus. To do this, invoke SQL\*Plus and run the procedure.

sqlplus fimsmgr/password start fgrnbld1

### Run the FGRGRBD Grant Rebuild Process (Part B)

Execute the C program FGRGRBD from the command line and respond to the on-screen messages and prompts. For additional information about parameters, refer to the documentation for FGRGRBD in "Chapter 4: Reports and Processes" of the Banner Finance User Guide.

Locate the program in the directory \$BANNER HOME/general/exe.

### Recreate the Public Synonym FRRGRNL (Part C)

Drop the public synonym FRRGRNL \_WORK and re-create the original public synonym by executing FGRNBLD2.SQL located in \$BANNER HOME/finance/plus. To do this, invoke SQL\*Plus and run the procedure.

```
sqlplus fimsmgr/password
start fqrnbld2
```

### Compile Objects in an Invalid State (Part D)

Run the guraltrb.sql utility script to compile all BANINST1-owned functions, views, packages and procedures that are in an invalid state.



### Marning

Any time a database object is modified (such as renaming the table FRRGRNL), other objects that have interaction with the changed object are marked as Invalid by the database system. You must resolve all such errors.

To compile objects which are currently in an invalid state, do the following:

1. Invoke SQL\*Plus and run the procedure.

```
sqlplus general/password
start quraltrb
```

2. At this point you may be prompted to enter a value for splpref, the spool preference variable. At the prompt **Enter value for splpref**, simply press **Enter** without entering a value. If you enter a value, the system either appends the value to the front of the file names shown below, or uses the value as a path to write those files if the value is a valid path.

```
galtrit.sql
glisaltr listing
```

**3.** You may need to repeat this process several times until all dependencies are validated.



The FGRGRBD Grant Rebuild Process is now complete.

## **Deferred Grant Accounting Process (FRRGRNT)**

## **Compilation of FRRGRNT**

The source code for the Deferred Grant Accounting Process is composed of two C programs: frrgrnt.pc linked with frpgrnp.pc.

If the FRRGRNT process needs to be compiled, there is a mass generation script provided with Banner Finance. The script (fimcmplc.shl) is located in \$BANNER\_HOME/finance/misc. This script will compile all Finance C programs in a UNIX environment. At the bottom of the script are statements necessary to compile the Deferred Grant Accounting Process. They are described below.

### **UNIX**

```
#Compile and link BANNER Finance Deferred Grant Accounting
Process
#
#
# Only those objects that have changed have to compiled. The
# LAST Line should always be included to re-link the objects.
#
#
make -f $BANNER_HOME/general/c/sctproc.mk frpgrnp.o
#
make -f $BANNER_HOME/general/c/sctproc.mk frrgrnt
LINKOBJS="$BANNER_HOME/general/exe/frpgrnp.o"
```

If the process aborts, you must delete the record from the FOBPROC table using the following SQL:

```
EXEC SQL

DELETE from fobproc

where fobproc_proc_code='FRRGRNT'

and fobproc_proc_type_code='C'
```

## **Transaction Interface Process (FGRTRNI)**

### Compilation of FGRTRNI

The source code for the Transaction Interface Process program is composed of two C programs: fgrtrni.pc linked with fgpabal.pc.

If the FGRTRNI process needs to be compiled, there is a mass generation script provided with BANNER Finance. The script (fimcmplc.shl) is located in \$BANNER\_HOME/finance/misc. This script will compile all Finance C programs in a UNIX environment. At the bottom of the script are statements necessary to compile the Transaction Interface Process. They are described below.

#### **UNIX**

```
#Compile and link BANNER Finance Transaction Interface Process
#
# Only those objects that have changed have to compiled. The
# LAST Line should always be included to re-link the objects.
#
#
make -f $BANNER_HOME/general/c/sctproc.mk
CHECKOPT="sqlcheck=full userid=baninst1/u_pick_it" fgpabal.o
#
make -f $BANNER_HOME/general/c/sctproc.mk fgrtrni
LINKOBJS="$BANNER_HOME/general/exe/fgpabal.o"
```

## **Posting Process (FGRACTG)**

### Compilation of FGRACTG

The source code for the Posting Process is composed of twelve linked C programs and an include file.

- fgpabal.pc
- fgpbody.pc
- fgpexxx.pc
- fgpinvm.pc
- fgpstor.pc
- fgppdoc.pc
- fgpgran.pc

- fgpfixa.pc
- frpgrnp.pc
- fgpeocd.pc
- fgractq.pc
- fgaprot.h

In addition, some functions are also used from the following general C library programs.

- guaorac.c
- guaorac2.pc
- guarpfe.c
- guastdf.c

The general include files are

- quarpfe.h
- guastdf.h
- quaerror.h

There are two mass generation scripts provided with BANNER FINANCE. The scripts (fincmplc.shl, fincmplc.pl) are located in \$BANNER\_HOME/finance/misc. These scripts will compile all Finance C programs in UNIX and Windows environments respectively. At the bottom of each file are statements necessary to compile the posting process. They are described below.

### UNIX

```
cd $BANNER_LINKS
#
# Compile and link BANNER Finance C Programs for POSTING
#
# You only need to compile the Posting objects that have
changed. The make line must always be included to re-link all
the objects.
#Compile and link BANNER Finance POSTING
#
#
# Only those objects that have changed have to compiled. The
# LAST Line should always be included to re-link the objects.
#
make -f $BANNER_HOME/general/c/sctproc.mk
CHECKOPT="sqlcheck=full userid=baninst1/u_pick_it" fgpabal.o
```

```
make -f $BANNER_HOME/general/c/sctproc.mk
CHECKOPT="sqlcheck=full userid=baninst1/u_pick_it" fgpinvm.o
make -f $BANNER_HOME/general/c/sctproc.mk
CHECKOPT="sqlcheck=full userid=baninst1/u_pick_it" frpbill.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpbody.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpeocd.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpexxx.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpfixa.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpgran.o
make -f $BANNER_HOME/general/c/sctproc.mk fgppdoc.o
make -f $BANNER_HOME/general/c/sctproc.mk fgpstor.o
make -f $BANNER_HOME/general/c/sctproc.mk frpgrnp.o
make -f $BANNER_HOME/general/c/sctproc.mk fgractg
LINKOBJS="$BANNER HOME/qeneral/exe/fqpabal.o $BANNER HOME/
general/exe/fgpbody.o $BANNER_HOME/general/exe/fgpeocd.o
$BANNER_HOME/general/exe/fgpexxx.o $BANNER_HOME/general/exe/
fgpfixa.o $BANNER_HOME/general/exe/fgpgran.o $BANNER_HOME/
general/exe/fgpinvm.o $BANNER HOME/general/exe/fgppdoc.o
$BANNER_HOME/general/exe/fgpstor.o $BANNER_HOME/general/exe/
frpbill.o $BANNER_HOME/general/exe/frpgrnp.o"
```

#### **Windows**

```
use sctcomp;
$sctcomp_product_dir = "finance";
$sctcomp_input_file_ref = \*DATA;
&sctcomp_c_process;
# Compile and link BANNER Finance C Programs for POSTING
# You only need to compile the Posting objects that have
changed. The linkjobs
    line must always be included to re-link all the objects.
fgpabal.pc -checkopt=full -exetype=obj
fgpinvm.pc -checkopt=full -exetype=obj
frpbill.pc -checkopt=full -exetype=obj
fgpbody.pc -exetype=obj
fgpeocd.pc -exetype=obj
fgpexxx.pc -exetype=obj
fgpfixa.pc -exetype=obj
fgpgran.pc -exetype=obj
fgppdoc.pc -exetype=obj
```

```
fgpstor.pc -exetype=obj
frpgrnp.pc -exetype=obj
#
fgractg.pc -
linkobjs="${banner_exe}${sctban_dirsep}fgpabal.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpbody.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpecd.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpexxx.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpfixa.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpfixa.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpgran.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpinvm.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpinvm.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpstor.${c_obj_ext}
${banner_exe}${sctban_dirsep}fgpstor.${c_obj_ext}
${banner_exe}${sctban_dirsep}frpbill.${c_obj_ext}
${banner_exe}${sctban_dirsep}frpbill.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
${banner_exe}${sctban_dirsep}frppinp.${c_obj_ext}
$}
```

## **NIGP Tape Load Process**

Load the NIGP (National Institute of Governmental Purchasing) tape into the Commodity Code Table (FTVCOMM) and Text Table (FOBTEXT) with the SQL\*Loader utility provided by ORACLE. The SQL\*Loader User's Guide explains how to load external files into ORACLE database tables.

A control file is provided (fimsnigp.ctl) which contains parameters that you must modify before you execute the load process.

### **Assumptions**

- The supplied fimsnigp.ctl file loads the digit (class-item-group-detail) NIGP file format.
- Load the NIGP tape to a disk file with utilities common to your operating system. The tape is in IBM EBCDIC format, unlabeled and 1600 bpi.
- Record length for the class-item-group-detail file is 466 characters, block length is 4660 characters. When you load the tape to a disk file, load it in the same format as the tape.
- Data from the NIGP tape will be appended (added) to the existing FTVCOMM table. Duplicate commodity codes will be in error.
- Line numbers for the FOBTEXT table start at 10 and increment by ten. There is a possibility of 9 line items of text for any given NIGP Commodity Code. Line numbers are defined as constants in the control file in the FOBTEXT\_SEQ\_NUM field.
- The commodity text field on the NIGP tape is 450 characters in length. SQL\*Loader does not allow the manipulation of data in order to determine when or

where text begins or ends. Text is extracted from the file in 50 character increments (as determined by the FOBTEXT\_TEXT field size in the FOBTEXT table). It is possible for words in the commodity text to be split between two lines. The FOBTEXT table is not updated if the text for a given commodity is 50 characters or less, since the FTVCOMM table contains a 50 character description.

- Set the Print Indicator on the FOBTEXT table to *Y* as defined in the control file (FOBTEXT\_PRNT\_IND). This text appears on all Purchase Orders.
- The Unit of Measure Code (UOMS) on the NIGP tape is four characters in length. The UOMS code on the FTVCOMM table is three characters in length. Only the first three characters of the NIGP UOMS code is loaded onto the FTVCOMM table.
- There are no UOMS codes for NIGP record type 1 (Class Record), type 2 (Item Record) or type 3 (Group Record). Since the FTVCOMM table requires a UOMS code, the UOMS code is valued with a constant N/A when loading the FTVCOMM table with these record types. Code N/A must exist on the FTVUOMS table.
- Once you load the FTVCOMM and FOBTEXT tables, review and correct all commodity entries, if necessary. This is especially important since the text on the FOBTEXT and FTVCOMM tables print on the Purchase Orders.
- 1. Load the NIGP tape to a xxxxxxxx.dat file. You should append the filename with .dat to indicate a data file. Load only the class-item-group-detail file (record length 466, block length 4600) contained on the tape. Ignore the class-item index file (record length 65 block length 6500).
- 2. Edit the fimsnigp.ctl file and change all date references accordingly. The INFILE parameter should contain the filename that you loaded in Step 1.
- **3.** Sign on to the operating system.
- **4.** Start the SQL\*Loader by typing:

```
sqlloader userid/password fimsnigp.ctl (ORACLE version prior to 6.0.36)
```

sqlldr userid/password fimsnigp.ctl (ORACLE version 6.0.36 and higher)

When SQL\*Loader begins an execution, it creates a log file (.log). The log file contains a detailed summary about the execution with the following sections:

- Header
- Global Information
- Table Information
- Data File Information
- Table Load Information

• Summary Statistics

As it executes, SQL\*Loader creates a file called the bad file (.bad). This file contains all records which the loader attempts to insert but cannot. It is written in the same format as the data file, so you can load the rejected data with the existing control file after you edit it. Rerun steps 2 and 3 to process the corrected data. Remember, the INFILE parameter in the .ctl file must reflect the name of the corrected data file.

The log file indicates the ORACLE error for each rejected record.



Once you load these tables, review the FTVCOMM and FOBTEXT entries, because the text descriptions print on the Purchase Orders.

## **Finance Check Processing**

Four processes comprise the Banner Finance Check writing process:

- FABCHKS selects the invoices to be paid
- FABCHKP prints the checks
- FABCHKR produces the check register
- FABCHKA creates the cash disbursements for the checks written in FABCHKP



These procedures are only examples of how to run checks at your installation. Due to differences in releases of the operation system and potential differences in site specific modifications to the operating system at your installation, these procedures may not run exactly as delivered. Please modify them to meet your site specific standards as necessary.

FABCHK1 is a procedure you use, in conjunction with job submission, to facilitate the check writing process.

There are currently five different types of processes which you can run from the Job Submission system:

- R = Oracle Report
- C = Pro \* C process
- *P* = Procedure (UNIX or Windows script)
- E = Executable
- J = Java Process

FABCHK1 is a procedure which executes Pro\*C. FABCHK1 executes FABCHKS and FABCHKP to select and print checks. You cannot combine all four of the processes into one procedure for the following reasons:

- A procedure within job submission can only point to one printer; FABCHKP and FABCHKR require different printers because of the special forms requirement of the check print.
- You cannot execute FABCHKA unless FABCHKP succeeds.

The definition of FABCHK1 appears on the GJAJOBS form as a procedure. When you enter FABCHK1 in the **Job Name** field, it submits FABCHK1 from the GJAPCTL form. The operating system is determined within job submission prior to when you execute FABCHK1. Job submission realizes the FABCHK1 is a procedure and executes it according to the operating system.

Following are the respective procedures that the job submission process selects according to the operating system that you use:

UNIX Shell Script FABCHK1.shl Windows FABCHK1.pl

After you execute the procedure, if you do not wish to send the output to the printer (selection on GJAPCTL), the output exists in your home directory. Review the notes in the procedure as they pertain to your operating system.

## **Receiving/Matching Process (FABMATC)**

The Control Parameters determine the processing of the Receiving Goods Form (FPARCVD) and the Invoice Form (FAAINVE). The Receiving Matching Process uses the information you enter into the documents and governs the actual payment of the invoice.

As mentioned previously, once you value the **Invoice Amount Requiring Receipt** field on the System Control Maintenance Form, the system marks any invoices that exceed this value with a status of *R* when they are complete. The Receiving/Matching Process (FABMATC) selects all invoices with a status of *R*, and finds the associated receiving data.

Those invoices which have receiving data that is not in suspense have the **Complete** indicator reset from *R* to *Y*. If you turn on approvals for Invoices, the system forwards the document to the Approvals in Process Table (FOBAINP), and processes it according to the approval queue and routing criteria which apply. If you do not turn on approvals for Invoices, the document is forwarded to the Approved Documents Table (FOBAPPD) to be processed in the next posting run.

Those invoices that either do not have sufficient receiving quantities, or have receiving data that is in suspense retain a status of R, and are evaluated the next time you run the Receiving/Matching Process.

The audit report from this process is divided into four sections.

- The first section displays a list of those invoices which have been matched and completed.
- The second section displays a listing of invoices that have sufficient quantity received for matching, but some or all of the necessary quantity is received after the invoice fiscal period. (This section applies only when the parameter Exclude Future Receipts is Y.) Local procedures must address the correct way to proceed.
- The third section of the report displays those invoices for which there is either no receiving information, or insufficient (accepted quantity is less than approved quantity) receiving information. Again, local procedures must address the correct way to proceed. Please see the Banner Finance User Guide for more information.
- The fourth section, entitled *Receiving Analysis Report*, displays those invoices for which the receiving data is in suspense. This typically means that there was an over-shipment amount for which the user who processed the receiving information was not authorized to approve (see the *Set-Up Control Parameters* discussion). Local procedures dictate the appropriate action.

There may be some invoices with no receiving information because the purchase is for something which is not formally received, like a service. Your site policy might be to create a packing slip document for the purchase. Alternatively, if there is no receiving information against a Purchase Order, the invoice form (FAAINVE) enable you to enter the **Quantity Accepted** field to record that an item has been received for the purpose of completing the invoice.

In some cases, there may be a timing issue. For instance, the invoice may be processed in A/P before the goods are received or processed. It might be an expediter's job to follow up, and ensure that the goods are shipped from the vendor, and that receiving is performed. For situations such as this, you must review the invoices on the second and third sections of the report. You cannot mark complete invoices held up because of receiving information in suspense, until you resolve or override the suspense condition. Invoices with insufficient or no receiving data remain on the report until you enter the receiving data. This is either because the goods finally arrive, or because you update the invoice itself with the receiving information.

You can run this process as often as local procedures can accommodate. It is to your advantage to run it at least once prior to the posting run prior to the check run. This ensures that all of the current matched invoices are posted and selected by the check process.

## **Year-End Processing Checklist**

The year end procedures are discussed in detail in the *Banner Finance User Guide*. The following provides a quick reference checklist for the year-end processes.

Form	Action Required
FTMCOAS	Verify that the Encumbrance, Budget Carry Forward and Document Roll Parameters in the Parameters Window of this form accurately reflect your site policies. Verify that you have a valid Fund e Account entered on this page as well.
	Your Chart of Accounts must be in effect prior to the year-end jobs you schedule on the Year End Ledger Maintenance Form (FGAYRLM).
FTMACTL	To roll any of or your encumbrances as $C$ (ommitted), you must set up the appropriate Prior Year accounts.
FTMSDAT	There must be valid System ID entries for the Encumbrance Roll, (ENCROLL), the Budget Carry Forward (BDGTFRWD), and the General Ledger Close (GLCLOSE). There must also be an entry specifying <i>E090</i> as the FGBTRNI_RUCL_CODE for FGBTRNI.
FTMFSYR	You must set up your new fiscal year. Also, make sure that you set the <b>Accrual Period</b> in both the current and future fiscal years to <i>N</i> (Not Opened).
FGAYRLM	Schedule your year-end jobs. Run these in the order in which they appear on the form. The first four characters of the document number must be unique. Use distinct document numbers for each Chart of Accounts for which you run the jobs. Remember, you do not need to run any of the year-end jobs to run processing in the new year.

Run the following processes:

1. Run the Balance Forward Report (FGRGLRL). This rolls the General Ledger account balances forward into the new fiscal year. The Control Accounts from the prior year close to the Fund Balance in the new fiscal year. This opens the **Accrual Period.** 

### **Form**

### **Action Required**

FGAYRLM (cont.)

Each of the following processes inserts records into the Transaction Interface Table (FGBTRNI). Therefore, after each process you must run the Interface Process (FGRTRNI) to edit the transactions, then the Transaction Error Report (FGRTRNR) to display your errors, if any. Correct your errors, and run the Posting Program (FGRACTG) to post the transactions.

- 2. Run the Roll Open Encumbrances Report (FGRENRL). This rolls the encumbrances specified on the Chart of Accounts record into the new fiscal year. The Encumbrance Control and related offset accounts are updated in the new year with this process.
- 3. Run the Roll Remaining Budget Balance Report (FGRBDRL). This is the report produced through the Budget Carry Forward Process. This brings the remaining budget from the prior year into the new fiscal year according to the parameters defined on the Chart of Accounts record. The Budget Control Accounts are updated in the new year. (This is the budget not already rolled in conjunction with the encumbrance roll.)
- 4. Run the Close General Ledger Report (FGRCLOP). This is the report produced through the Close Operating Accounts Process. This closes the Control, Fund Additions and Fund Deductions accounts in the prior year to the Fund Balance account in the prior year.

**FTMFSYR** 

Close the **Accrual Period** in the prior fiscal year.

## **Archive/Purge**



#### Marning

Always back up your data before running the Archive/Purge Process.

For additional information about the Archive/Purge process, refer to the Processing chapter in the *Banner Finance User Guide*.

### **Indexes**

The Archive/Purge Process is time-consuming but can be managed by understanding the indexes involved in the process. This section will discuss the two sets of indexes which are critical to the Archive/Purge Process. Create these indexes prior to running Archive/Purge and delete these indexes at the end of the process. Another consideration is the size of the indexes on the production FGBTRND and FGBTRNH tables. You should examine your intended usage of these tables in the archive database and consider removing them to conserve disk space, if appropriate.

The two specific Archive/Purge Process indexes are fgbtrnh\_arcpur\_index and fgbtrnd\_key7\_index.

The fgbtrnh\_arcpur\_index contains the following fields:

```
fgbtrnh_cos_code
fgbtrnh_fsyr_code
```

This index contains the primary sort parameters for the archiving of data and is necessary to optimize performance of the Archive/Purge Process.

The fgbtrnd\_key7\_index contains the following fields:

```
fgbtrnd_doc_code

fgbtrnd_doc_sequence_code

fgbtrnd_seq_num

fgbtrnd_item_num

fgbtrnd_submission_num

fgbtrnd_reversal_ind

fgbtrnd_serial_num
```

The primary purpose of this index is to optimize retrieval of the FGBTRND table.

These two indexes contain the additional filters that determine whether or not data is archived. The fgbtrnh\_arcpur\_index and the fgbtrnd\_key7\_index are to be created prior to run time of the Archive/Purge Process. These two indexes will reduce the execution time of the Archive/Purge Process. To minimize disk space utilization and avoid adverse effects to existing production processes, delete these indexes upon completion of the Archive/Purge Process.

If your Archive/Purge/Restore processing primary access is to the production FGBTRNH and FGBTRND tables, then the instructions in Part A1 and Part A2 can be used to construct the Archive/Purge specific indexes. If your Archive/Purge/Restore processing

primary access is to the archive FGBTRNH and FGBTRND tables, then the instructions in Part B1 and Part B2 can be used to construct the Archive/Purge specific indexes.

#### Part A1

To install the fgbtrnh\_arcpur\_index on FIMSMGR.FGBTRNH:

Invoke SQL\*Plus.
 sqlplus fimsmgr/password

- 2. Use the Oracle Metadata API (DBMS\_METADATA) or similar tool to query the storage parameters for the index fgbtrnh\_key\_index. You can use these saved storage parameters for constructing this fgbtrnh\_arcpur\_index or re-size to suit your needs.
- **3.** Using the appropriate storage parameters (as determined in Step 1), run the procedure:

```
start fgbtrnhl.sql
```

### Part A2

To install the fgbtrnd\_key7\_index on FIMSMGR.FGBTRND:

- Invoke SQL\*Plus. sqlplus fimsmgr/password
- 2. Use the Oracle Metadata API (DBMS\_METADATA) or similar tool to query the storage parameters for the index fgbtrnd\_key\_index. You can use the saved storage parameters for constructing this fgbtrnd\_key7\_index or re-size to suit your needs.
- **3.** Using the appropriate storage parameters (as determined in Step 1), run the procedure:

```
start fqbtrnd2.sql
```

### Part B1

To install the fgbtrnh\_arcpur\_index on FIMSARC.FGBTRNH:

- Invoke SQL\*Plus.
   sqlplus fimsarc/password
- 2. Use the Oracle Metadata API (DBMS\_METADATA) or similar tool to query the storage parameters for the index fgbtrnh\_key\_index. You can use these saved storage parameters for constructing this fgbtrnh\_arcpur\_index or re-size to suit your needs.

**3.** Using the appropriate storage parameters (as determined in Step 1), run the procedure:

```
start fgbtrnh1.sql
```

### Part B2

To install the fgbtrnd\_key7\_index on FIMSARC.FGBTRND:

- Invoke SQL\*Plus.
   sqlplus fimsarc/password
- 2. Use the Oracle Metadata API (DBMS\_METADATA) or similar tool to query the storage parameters for the index fgbtrnd\_key\_index. You can use the saved storage parameters for constructing this fgbtrnd\_key7\_index or re-size to suit your needs.
- **3.** Using the appropriate storage parameters (as determined in Step 1), run the procedure:

```
start fgbtrnd2.sql
```

Both of the FIMSARC tables (FGBTRNH and FGBTRND) should have indexes related to the following fields before processing begins:

- DOC CODE
- · DOC SEQ CODE
- SEQ NUM
- ITEM NUM
- SUBMISSION NUMBER
- REVERSAL IND
- SERIAL NUM

## Note

If FIMSARC.FGBTRNH does not have such an index (in addition to the fgbtrnh\_arcpur\_index) refer to ActionLine FAQ 7418 for assistance in creating the appropriate index.

In addition to the Archive/Purge specific indexes, the existing indexes of the production FGBTRND and FGBTRNH tables must be examined. Database tools can be used to retrieve index information for the production FGBTRND and FGBTRNH tables. The FGBTRND table has several associated indexes which are used for various performance boosts with posting and online query forms. Whether or not a clone of these production

indexes is necessary on the archive tables for your site depends upon how often you intend to use the FIMSARC online forms to view your archived data online.



Refer to ActionLine FAQ 1-4SRHEG for more information about database tools such as Oracle's Metadata API and its DBMS\_METADATA package

The indexes used in the Archive/Purge Process were optimized through testing at our early support site. The indexes associated with the archive FGBTRNH and FGBTRND tables (FIMSARC.FGBTRND and FIMSARC.FGBTRNH) should be utilized based on your site's expected usage of the archived data. You should also consider the method by which archived data will be retrieved. The early support site verified the results using only the fgbtrnd\_acct\_index. This allowed the data to be verified but only allowed the data to be searched by the accounting FOAPALs. You should verify the most likely method of retrieving the archived data with your users prior to creating each index.

### **Parameter List**

### Archive/Purge Process (FOPARCP)

Parameter Name	Optional/ Required Entry	Description
Parameter Sequence Number	Optional	System-generated
Hours of Processing Parameter (Number)	Optional	Indicates duration of time to process. If null, processing will continue until all relative data is processed. Otherwise, when actual execution time exceeds this parameter value, processing will come to a programmatic termination. If a document is currently being processed for archive/purge, then that cycle will complete prior to termination.
Action Indicator (A/P)	Required	Indicates which action this process will perform. (A)rchive will copy data from the production tables to the archive tables. The data is then removed from the production tables. (P)urge will remove data from the production or archive tables. This value is printed in the report header for every page (Action:). If (P)urge is selected, there will be a confirmation (Y/N) of this parameter. If confirmation of purge is <i>Y</i> , processing continues; otherwise, the program terminates.

Parameter Name	Optional/ Required Entry	Description
Database Indicator (P/A)	Optional	Indicates which tables are to be processed: (P)roduction tables or (A)rchive tables. This parameter is only valued when the Action Indicator equals (P)urge. This process can be used to purge data from either the production tables or the archive tables. The value of this parameter is printed in the report header for every page (next to literal Source:).
Execution Mode (A/U)	Required	Determines whether the process will be run in (A)udit mode or (U)pdate mode. Audit mode will produce a report detailing potential database activity; however, no database changes will occur. Update mode will produce the report <i>and</i> update the database. The database is determined by the value of the Action Indicator. This value is printed in the report header for every page (next to literal Mode:).
Perform Bank Reconciliation Edit (Y/N)	Optional	Indicates whether or not to perform the edits for bank reconciliation data (some Banner Finance sites reconcile check transaction processing and some do not). An entry of <i>Y</i> will perform these edits as part of the archive or purge execution. The default is <i>Y</i> .
Perform Grant Edit (Y/N)	Optional	Indicates whether or not to perform the edits for grant related data. An entry of <i>Y</i> will perform these edits as part of the archive or purge execution. The default is <i>Y</i> .
Grant Purge Years Tolerance (Integer)	Optional	This parameter is asked only if: (1) the grant edit is being performed and (2) a purge is taking place. Government regulations may require that grant data should not be deleted until 5 years after its termination date. The default is 5.
Print Mode (D/E)	Optional	When the Execution Mode is set to (A)udit, you may choose the Print Mode. A Print Mode set to (E)xceptions may produce a smaller, more manageable report. An Execution Mode of (U)pdate requires a Print Mode of (D)etail. The detail version of the report will include the exceptions data provided with an exception print mode execution.

Parameter Name	Optional/ Required Entry	Description
Chart of Accounts Code	Required	Multiple Chart of Accounts codes are allowed. The data in this field is compared to the chart of accounts field in the FGBTRNH table (if archiving or purging from the production database) or FGBTRNH_ARCHIVE table (if purging from the archive database). If the codes match, the associated records from the driver and related tables will be archived or purged. All charts are validated against the Chart of Accounts Validation Table (FTVCOAS). This verifies that the chart(s) exist; there is no effective or termination date checking.
Fiscal Year (YY)	Required	Multiple fiscal years are allowed. The data in this field is compared to the fiscal year in the related table. If the fiscal years match, the associated records from the driver and related tables are archived or purged. The fiscal year is used in conjunction with the Chart of Accounts to determine if the fiscal year is closed. If the fiscal year is not closed, the combination of fiscal year and Chart of Accounts is invalid and the data cannot be archived or purged. The fiscal year cannot be a current year or prior year with regard to concurrent year processing functionality. An archive/purge process can be reissued for the same chart of accounts and fiscal year relative to a document that has been partially archived or to check reconciliation.
Number of Printed Lines per Page	Required	The number of printed lines on a page; if left blank, this parameter defaults to 55.

## Restore Process (FOPARCR)

Parameter Name	Optional/ Required Entry	Description
Parameter Sequence Number	Optional	System-generated
Hours of Processing Parameter (Number)	Optional	Indicates duration of time to process. If null, processing will continue until all relative data is processed.  Otherwise, when actual execution time exceeds this parameter value, processing will terminate. If a document is currently being processed for restore, then that cycle will complete prior to termination.
Execution Mode (A/U)	Required	Determines whether the process will be run in (A)udit mode or (U)pdate mode. Audit mode will produce a report detailing potential database activity; however, no database changes will occur. Update mode will produce the report <i>and</i> update the database. The value of this parameter is printed in the report header for every page (next to literal Mode:).
Print Mode (D/E)	Optional	When the execution mode is set to (A)udit, you may choose the Print Mode. A Print Mode set to (E)xceptions may produce a smaller, more manageable report. An Execution Mode of (U)pdate requires a Print Mode of (D)etail. The detail version of the report will include the exceptions data provided with an exception print mode execution.
Chart of Accounts Code	Required	Multiple Chart of Accounts codes are allowed. The data in this field is compared to the chart of accounts field in the related table. If the codes match, the associated records from the driver and related tables will be restored. All charts are validated against the Chart of Accounts Validation Table (FTVCOAS). This verifies that the chart(s) exist; there is no effective or termination date checking.

Parameter Name	Optional/ Required Entry	Description
Fiscal Year (YY)	Required	Multiple fiscal years are allowed. The data in this field is compared to the fiscal year in the related table. If the fiscal years match, the associated records from the driver and related tables are restored. The process checks to make sure that a row exists on FTVFSYR for each chart and fiscal year combination.
Number of Printed Lines per Page	Required	The number of printed lines on a page; if left blank, this parameter defaults to 55.

### **Output**

As you run the Archive/Purge Process, you will see screen output similar to the following:

```
Username: fimsusr
Password:
Hours of Processing Parameter [Number]: 1
Action Indicator Archive/Purge [A/P]: A
Execution Mode Audit/Update [A/U]: A
Print Mode Detail/Exceptions [D/E]: D
Chart Of Accounts: A
Chart Of Accounts:
Fiscal Year (YY): 94
Fiscal Year (YY):
Perform Bank Reconciliation Edit [Y/N]: N
Number of printed lines per page [55]:
Starting FOPARCP (Rel 2.0.7) ...
Select Count = 0
Execution Time(HH:MM) = 0:0
Starting FOPARCP (Rel 2.0.7) ...
Select Count = 5000
Execution Time(HH:MM) = 1:48
```

**Starting FOPARCP** indicates the release version of Banner Finance.

**Select Count** indicates how many FGBTRNH records have been read.

**Execution Time** indicates approximately how long the process has been running.

### **Time Parameter**

Each time you run the Archive/Purge Process, you will be prompted to enter the Hours of Processing Parameter. The Archive/Purge Process is designed to be run during off-production hours. This parameter enables you to specify a definitive window of time in which to run the process. The purpose of this parameter is to allow the Archive/Purge Process to run to completion while giving the user the flexibility to limit its run time. The limits imposed by your production schedule can be managed using the Hours of Processing Parameter. The usage of this parameter does not require the Archive/Purge

Process to be restarted; you may complete a partial archive and later complete the process based on your production schedule.

# **Reports and Processes Matrix**

Legend	
Report or Process	The report/batch process name
Language	Identifies the language for the process - COBOL, C, RPT, SQL, or PL/SQL.
Update/Query	Does the process update any tables, or is it strictly a query-only report?
Audit	Can you run the update process in Audit Mode, so that you can produce the report without an update taking place?
	<b>Note:</b> Yes appears in this column only if the process permits both update and audit mode. If the report is query only, Yes does not appear in this column.
Job Submission	Can you run the process via job submission?
Sleep/Wake	Is the process used in conjunction with Sleep/Wake?
Off Peak	Is it recommended that you defer this program to an off-peak processing time (late night, weekends) for performance reasons?
Restart	If the process aborts or is terminated after the process is initiated, can you restart the process without any adverse consequences?
	<b>Note:</b> Yes does not appear in this column if the job can be restarted without special procedures.

# **Reports and Processes Attributes**

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FAB1099	С	Query					
FAB199K	С	Query		Yes			

FABCHKA         C         Update         Yes         Yes           FABCHKD         C         Update         Yes         Yes           FABCHKR         C         Update         Yes         Yes           FABCHKS         C         Update         Yes         Yes           FAM1099         C         Query         Yes         Yes           FAPCARD         PRO*C         Update         Yes         Yes           FAPCDIR         C         Update         Yes         Yes           FAPINVT         PRO*C         Update         Yes         Yes           FAPTREG         C         Update         Yes         Yes           FARAAGE         C         Query         Yes         Yes           FARBBAL         C         Query         Yes         Yes           FARCHKR         C         Query         Yes         Yes           FARCSHR         C         Query         Yes	Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FABCHKP C Update Yes Yes  FABCHKR C Query Yes  FABCHKS C Update Yes  FABMATC C Update Yes  FAM1099 C Query  FAPCARD PRO*C Update Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FARAAGE C Query  FARBBAL C Query  FARBREC C Update Yes  FARCHKR C Query  FARCHKR C Query  FARCHKR C Query  FARCSHR C QUERY  FARCSH	FABCHKA	С	Update		Yes			
FABCHKR C Query Yes Yes FABCHKS C Update Yes FABMATC C Update Yes FAM1099 C Query FAPCARD PRO*C Update Yes FAPDIRD C Update Yes FAPDIRD C Update Yes FAPINVT PRO*C Update Yes FAPTREG C Update Yes FARAAGE C Query Yes FARBBAL C Query Yes FARCHKR C Query Yes FARCHKR C Query Yes FARCSHR C Query Yes FARCSHR C Query Yes FARCSHR C Query Yes FARIAGE C Query Yes FARCSHR C Query Yes FARIAGE C Query Yes FARIREC C Query Yes	FABCHKD	С	Update		Yes			Yes
FABCHKS C Update Yes  FABMATC C Update Yes  FAM1099 C Query  FAPCARD PRO*C Update Yes  FAPCDIR C Update Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARBBAL C Query Yes  FARBBAL C Query Yes  FARCHKR C Query Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARIANVS C Query Yes  FARIANVS C Query Yes  FARIREC C Query Yes  FARIONV C Query Yes	FABCHKP	С	Update		Yes			Yes
FABMATC C Update Yes  FAM1099 C Query  FAPCARD PRO*C Update Yes  FAPCDIR C Update Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes	FABCHKR	С	Query		Yes			Yes
FAM1099 C Query  FAPCARD PRO*C Update Yes  FAPCDIR C Update Yes Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARIREC C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes	FABCHKS	С	Update		Yes			Yes
FAPCARD PRO*C Update Yes  FAPCDIR C Update Yes Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARIAGE C Query Yes  FARIAGE C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  FAROINV C Query Yes	FABMATC	С	Update		Yes			
FAPCDIR C Update Yes Yes  FAPDIRD C Update Yes  FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARLOSHR C Query Yes	FAM1099	С	Query					
FAPDIRD C Update Yes FAPINVT PRO*C Update Yes FAPTREG C Update Yes FARAAGE C Query Yes FARBBAL C Query Yes FARCHKR C Query Yes FARCSHR C Query Yes FARDIRD C Update Yes FARDIRD C Update Yes FARIAGE C Query Yes FARRINVS C Query Yes FARINVS C Query Yes FARINVS C Query Yes FARIREC C Query Yes FAROINV C Query Yes FAROINV C Query Yes	FAPCARD	PRO*C	Update		Yes			
FAPINVT PRO*C Update Yes  FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARBREC C Update Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARINDIRD C Update Yes  FARIAGE C Query Yes  FARINVS C Query Yes	FAPCDIR	С	Update		Yes			Yes
FAPTREG C Update Yes  FARAAGE C Query Yes  FARBBAL C Query Yes  FARBREC C Update Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARIAGE C Update Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes	FAPDIRD	C	Update		Yes			Yes
FARAAGE C Query Yes  FARBBAL C Query Yes  FARBREC C Update Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FAROINV C Query Yes	FAPINVT	PRO*C	Update		Yes			
FARBBAL C Query Yes  FARBREC C Update Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FAPTREG	С	Update		Yes			Yes
FARBREC C Update Yes  FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARAAGE	С	Query		Yes			
FARCHKR C Query Yes  FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARBBAL	С	Query		Yes			
FARCSHR C Query Yes  FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARBREC	С	Update		Yes			
FARCSHR C Query Yes  FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARCHKR	С	Query		Yes			
FARDIRD C Update Yes Yes  FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARCSHR	С	Query		Yes			
FARIAGE C Query Yes  FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes Yes	FARCSHR	C	Query		Yes			
FARINVS C Query Yes  FARIREC C Query Yes  FAROINV C Query Yes  Yes	FARDIRD	С	Update		Yes			Yes
FARIREC C Query Yes FAROINV C Query Yes Yes	FARIAGE	С	Query		Yes			
FAROINV C Query Yes Yes	FARINVS	C	Query		Yes			
- ,	FARIREC	C	Query		Yes			
FARVALP C Query Yes	FAROINV	C	Query		Yes			Yes
	FARVALP	С	Query		Yes			

Process L	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FARVHST C	C	Query		Yes			
FARVNUM C	C	Query		Yes			
FARWHLD C	C	Query		Yes			
FARWHLY C	C	Query		Yes			
FAT1099 C	C	Query		Yes			
FATCHKS C	C	Query		Yes			
FBRAPPD C	C	Query		Yes			
FBRAPPR C	C	Query		Yes			
FBRBDBB C	C	Update		Yes			
FBRBDDS C	C	Update		Yes			
FBRBDRL C	C	Update					
FBRFEED C	C	Update		Yes			
FBRMCHG C	C	Update		Yes			
FBRWKSH C	C	Query		Yes			
FCBBILL C	C	Update		Yes			
FCBEQPT C	C	Update		Yes			
FCBINVT C	C	Update		Yes			
FCBLABR C	C	Update		Yes			
FCBMATL C	C	Update		Yes			
FCRBDTR C	C	Query		Yes			
FCRSCHD (	C	Query		Yes			
FCRVARA C	C	Query		Yes			
FEPOEXT C	C	Update		Yes	Yes		
FFPDEPR C	C	Update	Yes	Yes			

Reports and Processes

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FFPOEXT	С	Update	Yes	Yes			
FFRAGRP	С	Query		Yes			
FFRDTGA	С	Query		Yes			Yes
FFRDTGT	С	Query		Yes			Yes
FFRMAST	С	Query		Yes			
FFRPROC	С	Query		Yes			
FFRPROP	С	Query		Yes			
FGPDROL	Java	Update	Yes	Yes		Yes	
FGPGEXT	С	Update		Yes			Yes
FGPOCFP	Java	Update		Yes			
FGRACCI	С	Query		Yes			
FGRACTG	C	Update		Yes	Yes		
FGRACTH	С	Query		Yes			
FGRACTV	C	Query		Yes			
FGRBAVL	С	Update		Yes		Yes	Yes
FGRBDRL	С	Update		Yes			
FGRBDSC	С	Query		Yes			
FGRBIEX	С	Query		Yes			
FGRBLSH	С	Query		Yes			
FGRCASH	С	Query		Yes			
FGRCBSR	С	Query		Yes		Yes	
FGRCGBA	C	Query		Yes		Yes	
FGRCGBS	С	Query		Yes		Yes	
FGRCHFB	С	Query		Yes		No	

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FGRCHNA	С	Query		Yes		No	
FGRCLOP	С	Update		Yes		No	
FGRCOBS	С	Query		Yes		Yes	
FGRCREF	С	Query		Yes		Yes	
FGRCSBA	С	Query		Yes		Yes	
FGRCSCF	С	Query		Yes		Yes	
FGRCSRE	С	Query		Yes		Yes	
FGRCSRP	С	Query		Yes			
FGRCSSR	C	Query		Yes		Yes	
FGRCTRL	С	Update		Yes			
FGRCUNA	С	Query		Yes			
FGRENRL	С	Update		Yes			
FGRFAAC	С	Query		Yes			
FGRFBAL	С	Query		Yes			
FGRFITD	С	Query		Yes			
FGRFNDH	С	Query		Yes			
FGRFPSN	С	Query		Yes			
FGRGLEX	С	Query		Yes			Yes
FGRGLRL	С	Update		Yes			
FGRGLTA	С	Update		Yes			
FGRGRBD	С	Update	Yes				
FGRIDOC	С	Query		Yes			
FGRJVLR	С	Query		Yes			
FGRLOCH	С	Query		Yes			

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FGRODTA	С	Query		Yes			
FGROPNE	С	Query		Yes			
FGRORGH	С	Query		Yes			
FGRPDTA	С	Query		Yes			
FGRPRAP	С	Query					
FGRPRAR	С	Update	Yes	Yes			
FGRPRGH	С	Query		Yes			
FGRREOB	С	Query		Yes			
FGRREOC	С	Query		Yes			
FGRTAXR	С	Query		Yes			
FGRTBAL	С	Query		Yes			
FGRTBEX	C	Query		Yes			
FGRTOFR	С	Query		Yes			
FGRTRNH	С	Query		Yes			
FGRTRNI	С	Update		Yes			
FGRTRNR	C	Query		Yes			
FIRBVAL	С	Query		Yes			
FIRDIST	C	Update	Yes				
FIRLINK	С	Query		Yes			
FIRPVAL	C	Query		Yes			
FIRRDST	С	Update	Yes	Yes			
FNPGAIN	С	Update	Yes	Yes			
FNPSPND	С	Update	Yes	Yes			
FNPUNTZ	С	Update	Yes	Yes			Yes

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FNRHIST	С	Query	Yes	Yes			Yes
FNRPRNC	C	Query	Yes	Yes			Yes
FNRSPNC	С	Query	Yes	Yes			Yes
FOPARCR	C	Update	Yes			Yes	Yes
FORAPPL	С	Update		Yes	Yes		
FPABIDD	C	Update		Yes			
FPACORD	С	Update		Yes			
FPAPORD	C	Update		Yes			
FPARQST	С	Query		Yes			
FPPPOBC	C	Update	Yes	Yes			Yes
FPRBEVL	С	Query		Yes			
FPRDELV	С	Query		Yes			
FPROPNP	С	Query		Yes			
FPROPNR	C	Query		Yes			
FPRRCDL	С	Query					
FPRRCST	C	Query		Yes			
FPRVCAT	С	Query		Yes			
FPRVVOL	C	Query		Yes			
FRBINF	С	Update	Yes	Yes			
FRPGINF	C	Update	Yes	Yes			
FRPMESG	С	Update			Yes		
FRR134B	Oracle	Query		Yes			Yes
FRR269R	Oracle	Query		Yes			Yes
FRR270B	Oracle	Query		Yes			Yes

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
FRR272B	Oracle	Query		Yes			Yes
FRR272R	Oracle	Query		Yes			Yes
FRRABUD	С	Update	Yes	Yes			Yes
FRRBDEX	С	Query		Yes			Yes
FRRBEXC	С	Query		Yes			Yes
FRRBILL	С	Update	Yes	Yes		Yes	Yes
FRRBREV	С	Update		Yes			Yes
FRRBUDG	С	Query		Yes			Yes
FRRCNSF	Oracle	Query		Yes			Yes
FRREVNG	C	Query		Yes			Yes
FRREVNP	С	Query		Yes			Yes
FRRFEXC	С	Query		Yes			Yes
FRRGBFY	С	Query		Yes			Yes
FRRGENB	Oracle	Query		Yes			Yes
FRRGENR	Oracle	Query		Yes			Yes
FRRGRNP	C	Update		Yes		Yes	
FRRGITD	С	Query		Yes			Yes
FRRGRNT	C	Update	Yes	Yes			Yes
FRRGRPT	С	Update		Yes			Yes
FRRINDC	С	Query		Yes			Yes
FRRINVS	С	Query		Yes			Yes
FRRTRNR	С	Query		Yes			
FSRDTLG	С	Query					
FSRINVL	С	Query		Yes			

FSRISST C Update Yes Yes  FSRLWSR C Query Yes  FSROPNR C Query Yes  FSROUTP C Query Yes  FSRPHYR C Update Yes  FSRPICK C Query Yes  FSRPIDR C Query Yes  FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes  FSRSTEX C Query Yes
FSROPNR C Query Yes  FSROUTP C Query Yes  FSRPHYR C Update Yes  FSRPICK C Query Yes  FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSROUTP C Query Yes  FSRPHYR C Update Yes  FSRPICK C Query Yes  FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSRPHYR C Update Yes  FSRPICK C Query Yes  FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSRPICK C Query Yes  FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSRPIDR C Query Yes  FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSRPIWS C Query Yes  FSRPUTL C Query Yes
FSRPUTL C Query Yes
FSRSTEX C Query Yes
FSRSUPC C Query Yes
FUPLOAD C Update Yes Yes
FURAPAY C Update Yes
FURFEED C Update Yes
NBPBROL C Update Yes Yes
NBPBUDM C Update Yes Yes Yes Yes
NBPMASS C Update Yes Yes Yes Yes
NBRBWRK C Query Yes Yes
NBRPCLS C Query Yes Yes
NBRPINC C Query Yes Yes
NBRPOSN C Query Yes Yes
NBRPSTA C Query Yes Yes
NHPFIN1 C Update Yes Yes Yes
NHPFIN2 C Update Yes Yes Yes Yes

Report or Process	Language	Update/ Query	Audit	Job Submission	Sleep/ Wake	Off Peak	Restart
NHRBDST	С	Query	Yes	Yes		Yes	Yes
NHRDIST	C	Query	Yes	Yes		Yes	Yes
NHRECRT	C	Update	Yes	Yes		Yes	Yes
NHREDST	С	Query	Yes	Yes		Yes	Yes
NHRSDST	С	Update	Yes	Yes		Yes	Yes
TRRAGES	С	Query		Yes			Yes
TRRAPPL	C	Update		Yes			Yes
TRRCOLL	С	Query		Yes			Yes
TRRRCON	С	Query		Yes			Yes
TRRUNAP	С	Update		Yes			Yes
TRRUNPL	С	Query		Yes			Yes

# **Running Oracle Reports with Finance**

When running through Internet Native Banner, Reports is not currently able to access the default role defined for the Report in the bansecr schema. Therefore, product-specific roles are being created with the base privileges needed to run the Reports, which must be granted to any user who will run Reports for that product using Internet Native Banner.

In the Finance product "plus" sub-directory, you will find fimorep.sql. This script will create the necessary role and assign the privileges needed to run the Reports. Please review this script before applying it to your production database.

Invoke SQL\*Plus and run the procedure:

```
sql_cmd system/password [ENTER]
start fimorep [ENTER]
```

Next, grant the role to the users who will be running the Reports.

For example,

```
sql_cmd system/password [ENTER]
```

```
grant ban_finance_rep to "your_user" [ENTER]
alter user "your user"
default role ban_default_connect, ban_finance_rep
```



The "alter user" statement should include all of the user's default roles. Refer to sys.dba\_role\_privs for existing roles where default\_role=YES for "your\_user" as grantee.

# **SQL\*Plus Scripts**

Finance SQL\*Plus procedures are provided to assist you as you produce summary reports. Refer to the General Technical Reference Manual for additional SQL\*Plus procedures.

When you install Banner Finance, a command file is provided to run sqlload. If your Oracle Version is 6.0.36 or higher, you must edit this command file: fipcusp.shl for UNIX; fipcusp.shl.com for VAX; and change the command sqlload to sqlldr.



In Oracle Release 6.0.36, the command name you use to access SQL\*Loader was changed from sqlload to sqlldr.

The procedures are as follows:

Procedure Name	Procedure Description
FIMFORG	Issues foreign grants from FIMSMGR to an end user account.
FIMGENG	Grants required General tables to FIMSMGR "WITH GRANT OPTION".
FIMSTUG	Grants required Student tables to FIMSMGR "WITH GRANT OPTION".
FINACTG	Determines if any accounting records are ready for the background routine to process (used by the sleep wake up routine).
FINSHUT	Terminates the background Finance accounting routine.
FIMFORD	Runs all of the scripts that grant FIMSMGR access "WITH GRANT OPTION" to tables owned by other Banner products, and then runs FIMFORG to grant access to the foreign tables to Finance end users.

<b>Procedure Name</b>	Procedure Description
FIMALUG	Grants required ALUMNI tables to FIMSMGR "WITH GRANT OPTION".
FIMPAYG	Grants required PAYROLL tables to FIMSMGR "WITH GRANT OPTION".
FIMPOSG	Grants required POSNCTL tables to FIMSMGR "WITH GRANT OPTION".
FIMTRAG	Grants required TAISMGR tables to FIMSMGR "WITH GRANT OPTION".
FIMRESG	Grants required FAISMGR tables to FIMSMGR "WITH GRANT OPTION".
FIMSBVL1	Renames FGBBAVL to FGBBAVL_WORK and FGRBAKO to FGRBAKO_WORK before you run FGRBAVL.
FIMSBLV2	Renames FGBBAVL and FGRBAKO after you run FGRBAVL.
FIMSCOL	Deletes records from all collector tables that you use in Banner Finance.
FGBTRND3	Optional index which supports a major access to the FGBTRND data through the use of the organization code.
FGBTRND4	Optional index which supports a major access to the FGBTRND data through the use of the fund code.

# Sleep/Wake-up

Banner provides two different mechanisms for running jobs in a cyclical or "sleep/wake-up" manner. Operating systems which do not have sleep commands, or whose sleep commands may not be executed by user programs, must use the first method.

#### **Method One**

The first method uses OS command scripts and an SQL\*Plus script to cause the job to run in a cyclical fashion. These jobs must be submitted from the operating system prompt and must be terminated manually. To compile programs to run in this fashion, you must define the NO\_SLEEP\_SW as a pre-compiler directive to exclude the code used by the second technique.

#### **UNIX**

The first command procedure, <code>sleepunx</code>, prompts for parameters needed by the second procedure and SQL\*Plus script, <code>sleepunx.shl</code> and <code>sleepunx.sql</code> respectively. This procedure then starts (or submits) <code>sleepunx.shl</code>, which in turn starts <code>sleepunx.sql</code>. The SQL\*Plus script <code>sleepunx.sql</code> will spool OS-specific commands to run the job into a file, provided there is actually work to do as determined by the parameters previously entered. When the SQL\*Plus script exits, <code>sleepunx.shl</code> executes the "spool" file. The parameters needed by the program are contained in a <code>xxxxxxxx.dat</code> file which are read via input redirection when the job executes. The second command procedure <code>sleepunx.shl</code> then "sleeps" for the specified interval, awakes, and loops back to start the SQL\*Plus script again.

#### **CMS**

In this environment, there is only one command script, sleepcms.exec. Each job run in sleep/wake mode must have its own .exec script. The command script sleepcms.exec is provided as the model. You also need to set up separate CMS accounts for each job or you may combine the execs to run sequentially on a single account. The .dat file is read via input redirection. "Sleeping" is performed using the CP SLEEP command.

#### **Method Two**

The second method has the program issue the OS-specific "sleep" command. This is the default compile configuration for these jobs. They may be submitted from either the operating system prompt or from the GJAPCTL form. If they are submitted manually, the parameters for the job are asked for interactively. If submitted from GJAPCTL, the parameters are read from the GJBPRUN table. Parameters used to control the interval are stored in the GJRSWPT table and may be changed as required without canceling and resubmitting the job. To stop these jobs, manually terminate them, or set an indicator on the GJASWPT form. A significant change to sleep/wake-up using Method Two is that all values used as selection identifiers by the program must be defined on the GTVPRNT form. This is because the program reads GTVPRNT in order to get the actual OS print command. For Method One, the print command is passed as a parameter to the second procedure.

### **VAX Sample COM File**

When the Banner Finance system starts up, the system executes the COM file for the background accounting routine shown below. This routine wakes periodically, and checks if any records are ready to post. If records exist, the process which actually processes the data is executed. You can terminate this process if you run the FINSHUT SQL procedure. This process terminates the next time the routine wakes up after you execute the FINSHUT SQL.

This process must be started by supplying the userid password at the system prompt.

```
DELETE TEMP.COM;*

SQLPLUS @FIN$PLUS:FINACTG.SQL

@TEMP

SUBMIT /NOPRINT/LOG=FINACTG.LOG /AFTER="+00:10"

FIN$COM:FINACTG
```

### **Sample UNIX Script**

There are three processes in Banner Finance that run on a wakeup basis.

- 1. FGRTRNI, to process deferred edit documents, auto journals, and interfaces
- **2.** FORAPPL, to process documents in the approval process
- **3.** FGRACTG, the general accounting posting process

In a UNIX environment, a process loads and stays parsed. Before each cycle, including the first, these processes ask "Enter any character to process", or <ENTER> to terminate. In wakeup mode, the system provides a **Y** response to this prompt by an echo command which is output piped to the process. The echo command is in a loop which contains a sleep command. At each wakeup interval, a **Y** is echoed into the pipe, and then the process sleeps for the specified interval. Use a marker file named using the Oracle instance name and the process name to control the wakeup process. As long as the marker file exists, the wakeup process continues. When you remove the marker file, the wakeup process terminates. You also use this marker file to determine if the requested process is already running on wakeup. Place the output of these processes in two files whose names are built from the UNIX process ID of the original user executed wakeup script. The first file is \$\$.log which contains the displays from the scripts and the error output of the process. The second file is \$\$.lis which is the output report. The \$\$ in both names is replaced by the UNIX process ID.

There are two scripts in this process.

- The first, which you execute, is fwakeup.shl. It accepts an optional wakeup interval and the name of the process to be run as parameters. The last parameter is taken as the process name, without the .pc suffix. If the first parameter is null, then the second parameter is taken as the wakeup interval in seconds. If no wakeup interval is given, a default interval of 600 seconds is used.
- The second script is fwakebg.shl, which is called by the first script, and starts the background wake process.

You should experiment with different wakeup intervals in your environment. Banner has run on our development environment with an interval as short as 30 seconds with little or no noticeable impact on overall system performance. On a short interval, only a few documents are typically handled in one cycle. If more documents than your environment can handle in one cycle await processing, another **Y** is in the pipe when the cycle ends, and the next cycle begins immediately. This continues until the wakeup process has caught up

and completes a cycle before the end of the wakeup interval. Note that the interval is from the start of one cycle to the start of the next cycle.

This process relies on the piping facilities of UNIX to allow a process to sleep without exiting. As we identify techniques on other platforms to accomplish this type of wakeup, we will extend the technique to those platforms. The current version is based on the operating system identifier in GENERAL.GUBINST containing UNIX. On any other operating system, the new prompts do not display, and each process executes one cycle and terminates in the same manner as before.

If you run a process by hand, be sure to provide a non-blank character in response to the first *Enter any character to process*, *or <ENTER> to terminate* prompt, or the process terminates without any processing.

#### **FWAKEUP.SHL**

```
#! /bin/sh
# unix shell to start a process running as a background task
that was
# designed to rerun itself in response to an .ASK command.
# processes that are run in this fashion must be update only.
# can reexecute very rapidly because the RPT does not have to
be reparsed.
# FWAKEUP creates a file called OOOO.RRRRRRR where OOOO is the
# current ORACLE_SID and RRRRRRR is the process name being
executed.
# This file indicates the process has started. If this file is
removed,
# the wakeup process will terminate on its next cycle.
# Define all variables that will be used by this procedure
WAKE=600# Wake up frequency in seconds
PROCESS=""# Process name being started (last parameter)
UID=""# ORACLE used id to sign on as
PW=""# The ORACLE password
MARK F=""# Marker File Name
LOG_DIR=""# Directory where log files will go
PID=$$# This process id number
# If no parameters were given just display usage:
```

```
if [ "$1" = "" ]
   then
      echo 'Usage is wake [-w nn] process'
      echo ' [-w nn] - set wake up interval in seconds.'
                        default is 600.'
      exit
fi
# Ask where the log files are to be placed
while [ "$LOG_DIR" = "" ] || [ ! -d "$LOG_DIR" ]
      echo "Enter the directory where the log file is to be
placed"
      echo "Enter a null response for the current directory (
`pwd` )"
      read LOG_DIR
      if [ "$LOG_DIR" = "" ]
        then
            LOG_DIR=`pwd`
      fi
   done
# process all parameters entered on the command line
while [ ! "$1" = "" ]
   do
      case $1 in
         -w) WAKE=$2;;
        *) PROCESS=$1;;
      esac
      shift
   done
# If the marker file exists the process may be executing
MARK_F="${LOG_DIR}/${ORACLE_SID}.${RPT_N}"
echo "Marker file for this process is ${MARK_F}"
```

```
if [ -r ${MARK_F} ]
   then
      echo "Marker file exists, the background process may
already be executing"
      exit
fi
# Prompt for the ORACLE id to sign on with
while [ "$UID" = "" ]
   do
      echo "Enter user id:
      read UID
   done
# Prompt for the ORACLE password
while [ "$PW" = "" ]
   do
      echo "Enter password for the $UID account: "
      stty -echo
      read PW
      stty echo
   done
# Create the marker file to indicate the process has started
touch ${MARK_F}
echo "File ${MARK_F} created, remove it to stop this process" \
     | tee ${LOG_DIR}/${PID}.log
echo "Processing ${RPT_N}.rpt." | tee -a ${LOG_DIR}/${PID}.log
echo "Diagnostic output will be saved as ${LOG_DIR}/${PID}.log"
     |tee -a ${LOG_DIR}/${PID}.log
# Export all variables so they can be accessed by the started
shell
export WAKE# Wake up frequency in seconds
export PROCESS# PROCESS name being started (last parameter)
export UID# ORACLE used id to sign on as
export PW# The ORACLE password
```

```
export MARK_F# Marker File Name
export LOG_DIR# Directory where log files will go
export PID# This process id number

# start the actual process as a background task
sh fwakebg.shl &

# Undefine all variables that were used by this procedure

WAKE="";export WAKE;
PROCESS="";export PROCESS_N;
UID="";export UID;
PW ="";export DW;
MARK_F="";export MARK_F;
LOG_DIR="";export LOG_DIR;
PID="";export PID;

exit
```

#### **FWAKEBG.SHL**

```
#! /bin/sh
# unix shell to start a process running as a background task
that was
# designed to rerun itself in response to an .ASK command.
# Processes that are run in this fashion must be only update.
# The process can reexecute very rapidly because it does not
have to be reparsed.
#FWAKEBG creates a file called OOOO.RRRRRR where OOOO is the
# current ORACLE SID and RRRRRRR is the process name being
executed.
# This file indicates the process has started. If this file is
removed,
# the wakeup process will terminate on its next cycle.
# Variables are passed to this process using environment
variables
# so that passwords and user id never appear on the command
line.
# Switch to the directory where the log files are to be placed
```

```
cd $LOG_DIR
echo "Background routine has started" >>${PID}.log
# Log non security sensitive parameters as a reference
echo "Wake up interval set to $WAKE" >>${PID}.log
echo "Using user id $UID" >>${PID}.log
echo "Log file will be placed in the $LOG_DIR directory"
>>${PID}.log
# loop running the requested rpt until the marker file is
removed
(while [ -r $\{MARK_F\} ]
      echo 'Y'
      sleep $WAKE
      done)
${BANNER_HOME}/general/exe/${PROCESS}-o ${PID}.lis$ {UID}/
${PW}/
 >/dev/null 2>>${PID}.log;
exit
```

### **Finance Wakeup**

FGRACTG Accounting posting routine
FGRTRNI Transaction interface routine
FORAPPL Document approval routine

# 2 Interfaces

The Banner Finance system interfaces with the following Banner products:

- · Banner Advancement
- · Banner General
- Banner Human Resources

# **Interfaces with External User Systems**

GURFEED Table This table contains financial transactions from Banner

applications which are to be processed by the client's Accounting system via a user interface program.

GURAPAY Table This table contains single line invoices from Banner

applications which are to be processed by the client's Accounts Payable system via a user interface program.

# **Interfaces within Banner**

GURFEED Table This table contains financial transactions from other

Banner applications or client-developed applications which are to be processed into Banner Finance using the

FURFEED and FGRTRNI processes.

GURAPAY Table This table contains single line invoices from other

Banner applications or client-developed applications, which are to be processed into Banner using the

FURAPAY process.

# 3 Conversion

To successfully convert your data, you should have a basic understanding of the Banner Data Element Dictionary (DED), and a report called *Tables and Views*. You should print hard copies of the General DED and the Finance DED when each tape cut is delivered.

The DED displays the following information:

Field Name Field name

Type Character or date field indicator

Width Field length

Scale Number of digits to the right of the decimal point (Oracle

Version 6 only). For example, a scale of 5 indicates

one-hundredths of a unit, as in .99

Nulls Null/Not Null Indicator

Column Comments Description of the column, abbreviation of the validation table,

and so on.

# **Conversion Tables**

On the following pages are the conversion tables you need in each module to convert your data for Banner Finance.

### **General Utilities**

Step 1 Execute appropriate General module forms to build General Utilities tables.

### **General Ledger**

Step 1 Set up a crosswalk file from the old accounting distribution to the new COAS, fund, organization, account, program, activity, and location. Step 2 Using the crosswalk file, build FGBTRNI (Transaction Input Table) with data to be loaded into Banner Finance. Common Rule Codes that are typically used in this process include JE05 (General Ledger Opening Balance) and BD01 (Original Budget). Step 3 Using the appropriate validation maintenance forms, enter user-defined values in the following validation tables: FTVACCI (Account Index Validation Table) (optional) FTVACCT (Account Validation Table) FTVACTL (Control Account Validation Table) FTVACTV (Activity Validation Table) FTVATYP (Account Type Validation Table) GXRBANK (Bank Validation Table) FTVCOAS (Chart of Accounts Validation Table) FTVFSPD (Fiscal Period Validation Table) FTVFSYR (Fiscal Year Validation Table) FTVFTYP (Fund Type Validation Table) FTVFUND (Fund Validation Table) FTVLOCN (Location Validation Table) FTVORGN (Organization Validation Table) FTVPROG (Program Validation Table)

### Step 4 Run the following:

- FGRTRNI (Transaction Input Processing Report) to build the journal voucher tables:
  - FGBJVCH (Journal Voucher Header Table)
  - FGBJVCD (Journal Voucher Detail Table) and
  - FOBAPPD (Approved Document Table) from the FGBTRNI table built in Step 2 or FOAUAPP (Unapproved Document Table)

Note: The FGRTRNI process can place the feed document in the FOBAPPD (Approved Document Table), the FOAUAPP (Unapproved Document Table), or create the document as incomplete so it can be reviewed on the JV form. The outcome is determined by how you utilize the FGRTRNI process approval feature.

- Step 5 Run FGRACTG (Posting Report) to create these ledgers:
  - FGBGENL (General Ledger Table)
  - FGBOPAL (Operating Account Ledger Table)
  - FGBENCH (Encumbrance Ledger Header Table)
  - FGBENCD (Encumbrance Distribution Table)
  - FGBENCP (Encumbrance Period Detail Table) and these transaction history tables:
    - FGBTRNH (Transaction History Table)
    - FGBTRND (Transaction History Detail Table)

# **Accounts Payable**

#### Step 1 Value the following:

- STVATYP (General Address Type Table)
- FTVDISC (Vendor Discount Terms Table) if using discounts
- FTVTRAT (Vendor Tax Rate Table) if tax codes are used
- FTVVTYP (Vendor Type Table)
- Step 2 Convert the following:
  - SPRIDEN (General Person Identification Table)
  - SPRADDR (General Person Address Table)

- Step 3 Convert FTVVEND (Vendor Validation Table)
- Step 4 Enter invoices or convert the following:
  - FABINVH (Invoice Header Table)
  - FARINVC (Invoice Commodity Table)
  - FARINVA (Invoice Accounting Table)

For each record inserted into FABINVH (Invoice Header Table), a record should be inserted in FOBDINP (Document in Progress Table). This triggers FGRTRNI (Transaction Input Processing Report) to process and validate each invoice.

- Step 5 Run FGRTRNI (Transaction Input Processing Report) to add records to FOBAPPD (Approved Document Table) for each invoice.
- Step 6 Run FGRACTG (Posting Report) to update financial ledgers and transaction history tables.

## **Purchasing and Procurement**

- Step 1 Value the following:
  - STVATYP (General Address Type Table)
  - FTVBUYR (Buyer Verification Table)
  - FTVSHIP (Ship To Verification Table)
- Step 2 Convert the following:
  - SPRIDEN (General Person Identification Table)
  - SPRADDR (General Person Address Table)
- Step 3 Convert FTVVEND (Vendor Validation Table).
- Step 4 Enter Purchase Orders or convert the following:
  - FPBPOHD (Purchase Order Header Table)
  - FPRPODT (Purchase Order Commodity Table)
  - FPRPODA (Purchase Order Accounting Table)

For each record inserted into the FPBPOHD table, a record should be inserted into FOBDINP (Document in Progress Table). This triggers FGRTRNI (Transaction Input Processing Report) to process and validate each purchase order.

- Step 5 Run FGRTRNI (Transaction Input Processing Report) to add records to FOBAPPD (Approved Document Table) for each purchase order.
- Step 6 Run FGRACTG (Posting Report) to update financial ledger and transaction history tables.

# **General Financial Utilities** — User Profile/Security/ Approvals

Step 1 Execute appropriate General Financial Utilities forms to build the user profile/security/approval tables.

# **Budget and Position Control — Budget Development**

- Step 1 Value the following:
  - FTVOBUD (Budget Identifier Table) for every budget ID to be developed.
  - FTVOBPH (Budget Phase Table) for every budget phase to be developed.
- Step 2 Execute the following:
  - FBABDRQ (Budget Request Form) to establish budgeted line items,
  - FBABDRA (Budget Request by Account) to establish budgeted line items by account, or optionally, if the budget is being developed from existing general accounting data, execute the following:
    - FBABPRC (Budget Process Control Form) to specify the COAS and fiscal year or FGBOPAL (Operating Account Ledger Table) records to be rolled
- Step 3 Run FBRBDBB (Build Budget Report) to roll operating account data into a specified budget phase.

### **Endowments**

- Step 1 Ensure that Step 3 of the Utilities has already been performed.
- Step 2 Using the appropriate validation maintenance forms, enter user-defined values in the following tables:
  - FNVPOOL (Endowed Pool Definition Table)
  - FTVINCL (Income Classification Validation Table)
  - FNRUCTR (Unitized Funds Market Value Table)
  - FTVSDAT (System Data Maintenance Table)

Verify that the entries exist for entity FNVENDW and attribute FNVENDW\_ENDW\_TYPE for your various endowment types.

Step 3 Load FNVENDW (Endowment Fund Table) manually or build it using standard conversion tools.

Loading the endowment summary balances and units is complicated and requires great care and analysis. One method to use is documented in Steps 4-8.

Step 4 Using the crosswalk file, build FGBTRNI (Transaction Input Table) with data to be loaded into Banner Finance.

Common Rule Codes that are typically used in this process include CR05 (Cash Receipt Entry). The intent is to load both the units and the amount on the same transaction record. Data is typically entered with the last day of the fiscal year prior to go-live.

Set the balance to zero in the header record to force an error on the load.

Store the units in the following field: fgbtrni\_doc\_ref\_num

- Step 5 Run FGRTRNI (Transaction Input Processing Report) to build the journal voucher tables:
  - FGBJVCH (Journal Voucher Header Table)
  - FGBJVCD (Journal Voucher Detail Table)

Step 6 Because gift units do not exist as a field in FGBTRNI, use SQL to move fgbjvcd\_doc\_ref\_num to fgbjvcd\_emc\_units; otherwise, it will be loaded as a gift number in the Endowments module.

Recomplete the journal voucher online. This inserts the journal voucher into FOBAPPD (Approved Document Table).

- Step 7 Run FGRACTG (Posting Report) to create the following ledgers:
  - FGBGENL (General Ledger Table)
  - FGBOPAL (Operating Account Ledger Table)
  - FGBTRNH (Transaction History Table)
  - FGBTRND (Transaction History Detail Table)
  - FNBUNTD (Endowment Unitization Collector Table)
- Step 8 Run FNPUNTZ (Unitization Process) for each Chart and Pool.

This removes records from FNBUNTD (Endowment Unitization Collector Table) and inserts records into FNRUNIT (Endowment Funds Units Table), FNBUNTH (Endowment Unitization History Table) and updates FNRUCTR (Unitized Funds Market Value Table) with valuation period and units posted for the period.

### **Fixed Assets**

#### Step 1 Value the following:

- FFBSYSC (Fixed Assets System Control Table)
- FFVACON (Fixed Asset Condition Code Table)
- FFVACQM (Fixed Asset Acquisition Method Code Table)
- FTVASTY (Asset Type Table)
- FTVDEPR (Depreciation Table)
- FFVDISP (Fixed Asset Disposal Method Code Table)
- FFVTTST (Fixed Asset Title-To Code Table)

- Step 2 Enter Fixed Assets using FFAMAST (Fixed Asset Master Maintenance Form) and FFADEPR (Fixed Asset Depreciation Form), or convert the following:
  - FFBMAST (Fixed Asset Master Table)
  - FFRMASF (Fixed Assets Accounting Source Table)
  - FFRMASA (Fixed Assets Capitalization and Depreciation Accounting Table)
  - FFRFUSN (Fixed Asset User Defined Attributes Table)

### **Cost Accounting**

- Step 1 Value these support tables in the following order:
  - FTVRTYP (Rate Rules Table was delivered as seed data)
  - FTVINRT (Internal Rate Code Table)
  - FTVIRTO (Organization/Rate Code Table)
  - FTVCTYP (Cost Type Code Table)
  - FTVCSTO (Organization/Cost Type Table)
  - FTVINRT (Inventory Code Table)
  - FTVEQPT (Equipment Tag Table)
  - FCBRATE (Internal Rate Table)
  - FTVRTCT (Organization Rate Code/Cost Type Table)
- Step 2 Convert the following:
  - SPRIDEN (General Person Identification Table)
  - SPRADDR (General Person Address Table)
- Step 3 Enter Employees and Customers on FCAEMPL and FTMCUST or convert the following:
  - FCBEMPL (Employee Table)
  - FTVCUST (Customer Table)

- Step 4 Enter Projects and Project Charges on FTMPROJ and FTMCHRG or convert the following:
  - FTVPROJ (Project Header Table)
  - FTVCHRG (Project/Customer Charge Table)

If the project has customers that are being encumbered (if one customer is encumbered, all customers must be encumbered), a record should be inserted into FOBAPPD (Approved Document Table).

- Step 5 Run FGRACTG (Posting Report) to update Encumbrance ledgers and transaction history tables.
- Step 6 Enter Cost Accounting Transactions on FCAACCT or convert FCBPRJD (Project Detail Table).

Enter Billing process parameters on FCAPARM for process "BILL". Run this in database update mode.

Run FCBBILL (Billing Report) to process project detail and create transaction records for FGRTRNI to process.

- Step 7 Run FGRTRNI (Transaction Input Processing Report) to add records from FCBBILL to the FOBAPPD (Approved Document Table), the FOAUAPP (Unapproved Document Table), or create the document as incomplete so it can be reviewed on the JV form. The outcome is determined by how you utilize the FGRTRNI process approval feature.
- Step 8 Run FGRACTG (Posting Report) to update financial ledger and transaction history tables.

# Stores Inventory

- Step 1 Value FTVSHIP (Ship To Verification Table)
- Step 2 Convert the following:
  - FTVCOMM (Commodities Verification Table)
  - FTVINVM (Stores Commodity Master)
  - FTVSTKL (Stock Location Table)

- Step 3 Convert Stores Requisitions or the following:
  - FPBREQH (Request Header Table)
  - FPRREQD (Request Detail Table)
  - FPRREQA (Request Accts Table)

For each record inserted into the FPBREQH table, you must complete each document online.

- Step 4 Run FGRACTG (Posting) or convert the following:
  - FSBISSH (Issue Header Table)
  - FSRISSD (Issue Commodity Detail Table)
  - FSRISSA (Issue Accounting Table)

For each record inserted into the FSBISSH table, you must complete each document online.

Step 5 Run FGRACTG (Posting) to update the financial ledger and transaction history tables.

Conversion

# **APIs**

### **Overview**

Application Programming Interfaces (APIs) enhance processing and simplify code. The API is actually a program comprised of four different packages: a primary package containing query functions and create, update, and delete procedures, a Rules package containing subprograms that support the primary package, a Strings package containing error messages, and an associated DML package that performs the actual database maintenance of the edited data.

In addition to the API packages, other supporting package types include the following:

- Support Contains supporting programs that may be called by other APIs and error messages related to these edits.
- Validation Contains standard functions and procedures for a specific validation table.

For additional information, refer to the API Technical Documentation available via the Customer Support Center.

# APIs and Supporting Packages used in Banner

Banner Finance currently includes five categories of APIs: Procurement APIs, Invoice APIs, Journal Voucher APIs, Encumbrance APIs, and Effort Certification APIs.

#### **Procurement APIs**

Procurement APIs are used by the Purchase Order Form (FPAPURR), Requisition Form (FPAREQN) and the Self-Service Purchase Order page (bwfkpurr.P\_PurchaseOrder) to calculate taxes, update the tax table, and display tax calculations.

In addition, the interfaces that enable e-Procurement integration between SciQuest HigherMarkets and Banner perform tax and currency conversion calculations.

#### **Invoice APIs**

Invoice APIs are used for the four major invoice tables:

- Invoice Header Table (FABINVH)
- Invoice Commodity Table (FARINVC)
- Invoice Accounting Table (FARINVA)
- Invoice Tax Allocation Table (FARINTX)

These APIs include query functionality, and may be used to create, update, and delete individual rows in the four base invoice tables. The logic in the business entity APIs addressed the edits pertaining to each of these tables individually, but not to the invoice as a whole.

The release of the business process APIs enabled FOAPAL re-defaulting for update, and provided update capability for multiple vendor invoices. For additional information, refer to "Business Entity APIs" on page 4-16 and "Business Process APIs" on page 4-18.

### **Journal Voucher APIs**

Journal Voucher APIs are used for the two journal voucher tables:

- Journal Voucher Header Table (FGBJVCH)
- Journal Voucher Detail Table (FGBJVCD)

These APIs include query functionality and may be used to create, update, and delete individual rows in the two base journal voucher tables. The logic in the business entity APIs addressed the edits pertaining to each of the tables individually, but not to the journal voucher as a whole.

The business process API contains the core blocks necessary to create and complete the journal voucher. The Journal Voucher Maintenance form (FGAJVCD) is the primary example of how to use the logic of the Journal Voucher APIs within Banner Finance.

#### **Encumbrance APIs**

Encumbrance APIs are used for the two encumbrance tables:

- Encumbrance Header Table (FGBENCH)
- Encumbrance Detail Table (FGBENCD)

These APIs include query functionality and may be used to create, update, and delete individual rows in the two base encumbrance tables. The logic in the business entity APIs addressed the edits pertaining to each of the tables individually, but not to the encumbrance as a whole.

The business process API contains the core blocks necessary to create and complete the encumbrance. The General Encumbrance Maintenance form (FGAENCB) is the primary example of how to use the logic of the Encumbrance APIs within Banner Finance.

#### **Effort Certification APIs**

Effort Certification is your institution's process for reviewing, validating, and certifying the work effort performed by its faculty and staff in support of sponsored research projects. Effort Certification is a process in Banner Human Resources that is supported by Banner Finance APIs.

The Effort Certification APIs can be used to create, update, and delete individual rows in the following table:

Grant Effort Certification Rules Table (FRRGREC)

For detailed information about the Effort Certification enhancement, please refer to the *Effort Reporting and Labor Redistributions Handbook*.

## **API Packages**

The following charts identify the API packages and supporting packages used to process Finance data in Banner. The APIs replace the corresponding code in the Banner forms.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_accounting_ ACCOUNTING_ element ELEMENT	Contains business interface for	FTVCOAS	fb_accounting_ element_rules	
		IFOAPAL information.		Provides supporting subprograms for ACCOUNTING_ ELEMENT.
fb_chart_of_ accounts	CHART_OF_ ACCOUNTS	Contains the standard DML	FTVCOAS	fb_chart_of_ accounts_rules
	accounts  ACCOUNTS  standard DML functions for CHART_OF_ ACCOUNTS.	CHART_OF_		Provides supporting subprograms for CHART_OF_ ACCOUNTS.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_commodity	COMMODITY	Contains the standard DML	FTVCOMM	fb_commodity_ rules
		functions for COMMODITY.		Provides supporting subprograms for COMMODITY.
				fb_commodity_ strings
				Provides error messages and error message functions for COMMODITY.
fb_common	functions, procedures,		N/A	fb_common_ strings
		procedures, and variables for Finance.		Provides error messages and error message functions for COMMON.
fb_encumbrance_ detail	ENCUMBRANCE_ DETAIL	Contains the common business	FGBENCD	fb_encumbrance_ detail_rules
interface for the General Encumbrance Detail API (ENCUMBRANCE_DETAIL).		Provides supporting subprograms for ENCUMBRANCE_DETAIL.		
				<pre>fb_encumbrance_ detail_strings</pre>
				Provides error message and error message functions for ENCUMBRANCE_DETAIL.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_encumbrance_ header	ENCUMBRANCE_ HEADER	Contains the common business	FGBENCH	fb_encumbrance_ header_rules
		interface for the General Encumbrance Header API (ENCUMBRANCE_ HEADER).		Provides supporting subprograms for ENCUMBRANCE_HEADER.
				fb_encumbrance_ header_strings
				Provides error messages and error message functions for ENCUMBRANCE_ HEADER.
fb_grant_ effcert			FRRGREC	fb_grant_ effcert_rule
		Grant Effort Certification API (GRANT_		This package contains the business logic processing rules for GRANT_EFFCERT.
				fb_grant_ effcert_strings
				This package contains error messages and error message functions for GRANT_ EFFCERT.
				dml_frrgrec
				Provides the procedures to insert, update, and delete from various Banner tables.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_invoice_ header	INVOICE_ HEADER	Contains the common business interface for INVOICE_	FABINVH	fb_invoice header_rules
				Provides supporting subprograms for INVOICE_ HEADER.
				fb_invoice_ header_strings
				Provides error messages and error message functions for INVOICE_ HEADER.
				dml_fabinvh
				Provides the procedures to insert, update, and delete from various Banner tables.
fb_invoice_item	INVOICE_ITEM	Contains the common business	FARINVC	fb_invoice_item _rules
	interface for	interface for INVOICE_ITEM.		Provides supporting subprograms for INVOICE_ITEM.
				fb_invoice_item _strings
				Provides error messages and error message functions for INVOICE_ITEM.
				dml_farinvc
				Provides the procedures to insert, update, and delete from various Banner tables.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_invoice_ acctg	INVOICE_ACCTG	Contains the Common Business	FARINVA	fb_invoice_ acctg_rules
		interface for INVOICE_ACCTG		Provides supporting subprograms for INVOICE_ACCTG.
				fb_invoice_ acctg_strings
				Provides error messages and error message functions for INVOICE_ ACCTG.
				dml_farinva
				Provides the procedures to insert, update, and delete from various Banner tables.
fb_invoice_ tax	INVOICE_TAX	Contains the Common Business	FARINTX	fb_invoice_ tax_rules
		interface for INVOICE_TAX.		Provides supporting subprograms for INVOICE_TAX.
				fb_invoice_tax_ strings
				Provides error messages and error message functions for INVOICE_TAX.
				dml_farintx
				Provides the procedures to insert, update, and delete from various Banner tables.

APIs

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_jv_header	JV_HEADER	Contains the Common Business	FGBJVCH	fb_jv_header_ strings
	interface for the Journal Voucher Header API (JV_HEADER).		Provides error messages and error message functions for JV_HEADER.	
				fb_jv_header_ rules
				Provides supporting subprograms for JV_HEADER.
				dml_fgbjvch
				Provides the procedures to insert, update, and delete from various Banner tables.
fb_jv_detail		Common Business	FGBJVCD	fb_jv_detail_ strings
		Journal Voucher Detail API		Provides error messages and error message functions for JV_DETAIL.
				fb_jv_detail_ rules
				Provides supporting subprograms for JV_DETAIL.
				dml_fgbjvcd
				Provides the procedures to insert, update, and delete from various Banner tables.
fb_purchase_ order	PURCHASE_ ORDER	Contains the Common Business	FPBPOHD FPRPODA	fb_purchase_ order_rules
		interface for PURCHASE_ ORDER.	FPRPODT	Provides supporting subprograms for PURCHASE_ORDER.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_po_tax	PO_TAX	Contains the	FPRPOTX	fb_po_tax_rules
		Common Business interface for the Purchase Order Tax Table (PO_TAX).		Provides supporting subprograms for PO_TAX.
				fb_po_tax_ strings
				Provides error messages and error message functions for PO_TAX.
				dml_fprpotx
				Provides the procedures to insert, update, and delete from various Banner tables.
fb_ requisition	REQUISITION	common business FPRR	FPBREQH FPRREQD	fb_requisition_ rules
			FPRREQA	Provides supporting subprograms for REQUISITION.
fb_req_tax	REQ_TAX	Contains the Common Business	FPRRQTX	fb_req_tax_ rules
		interface for the Requisition Tax Table (REQ_TAX).		Provides supporting subprograms for REQ_TAX.
				fb_req_tax_ strings
				Provides error messages and error message functions for REQ_TAX.
				dml_fprrqtx
				Provides the procedures to insert, update, and delete from various Banner tables.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_ship	SHIP	Provides standard DML functions for the FTVSHIP table.	FTVSHIP	fb_ship_rules
				Provides supporting subprograms for SHIP.
fb_vendor	VENDOR	Provides the common business interface for VENDOR.	FTVVEND	fb_vendor_rules
				Provides supporting subprograms for VENDOR.
				fb_vendor_ strings
				Provides error messages and error message functions for VENDOR.
fb_vendor_ type	VENDOR_TYPE	Provides the common business interface for VENDOR_TYPE.	FTVVENT	fb_vendor_ type_rules
				Provides supporting subprograms for VENDOR_TYPE.
				fb_vendor_ type_strings
				Provides error messages and error message functions for VENDOR_TYPE.
fp_encumbrance	ENCUMBRANCE	Process API for encumbrances (ENCUMBRANCE).		fp_encumbrance_ str
				Provides error message and error message functions for ENCUMBRANCE.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fp_invoice	INVOICE	Contains the Common Business interface for the composite entity Invoice (FP_INVOICE).	Invoice Tables: FABINVH FARINVA FARINVC FARINTX	fp_invoice_ strings  Provides error messages and error message functions for INVOICE.
fp_journal_ voucher	JOURNAL_ VOUCHER	Process API for Journal Vouchers (JOURNAL_ VOUCHER).	Journal Voucher Tables: FGBJVCH FGBJVCD	fp_journal_ voucher_str Provides error messages and error message functions for JOURNAL_ VOUCHER.

## **Other API Packages**

The following packages support the circulation of documents and approval requests using custom events in Banner Workflow. They are owned by Finance to enable shared access by the Travel and Expense Management and eProposal Management modules. These supporting packages operate in the background, are not part of Finance processing, and are not intended for general usage. Therefore they are not included in the Finance API technical documentation.

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_circulation_header	CIRCULATION_ HEADER	Common Business interface for the CIRCULATION_ HEADER table.	FOBCIRH	fb_circulation_ header_rules
				Provides supporting subprograms for CIRCULATION_HEADER.
				fb_circulation_ header_strings
				Provides error messages and error message functions for CIRCULATION_HEADER.
				dml_fobcirh
				Standard dml functions and procedures for the Circulation Header table (FOBCIRH).
fb_circulation_ notice	CIRCULATION_ NOTICE	Common Business interface for CIRCULATION_NOTICE.	FORCIRN	fb_circulation_ notice_rules
				Provides supporting subprograms for CIRCULATION_NOTICE.
				fb_circulation_ notice_strings
				Provides error messages and error message functions for CIRCULATION_NOTICE.
				dml_fobcirn
				Standard dml functions and procedures for the Circulation Routing Notification table (FORCIRN).

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_circulation_ recip		FORCIRR	fb_circulation_ recip_rules	
			Provides supporting subprograms for CIRCULATION_RECIP.	
				fb_circulation_ recip_strings
				Provides error messages and error message functions for CIRCULATION_RECIP.
				dml_fobcirr
				Standard dml functions and procedures for the Routing Recipient table (FORCIRR).

Object Name	Entity Name	Task Performed	Associated Tables	Associated Packages
fb_circulation_ step			FORCIRS	fb_circulation_ step_rules
			Provides supporting subprograms for CIRCULATION_STEP.	
				fb_circulation_ step_strings
				Provides error messages and error message functions for CIRCULATION_STEP.
				dml_fobcirs
				Standard dml functions and procedures for the Routing step table (FORCIRS).
fp_circulation	CIRCULATION	This package contains procedures that facilitate circulation flow.		

# **Support Packages**

The following packages contain supporting programs that may be called by other APIs and error messages related to these edits.

Object Name	Task Performed	Associated Tables
ffkedit	Consolidates the editing and defaulting for Rule Class edits.	FTVEDIT
ffkfoap	Edits codes for the following: chart of accounts, fund, organization, account, program, activity, location, project, and bank.	FTVCOAS FTVFUND FTVORGN FTVACCT FTVPROG FTVACTV FTVLOCN

Object Name	Task Performed	Associated Tables
ffkrulp	Ensures that all data required by the Rule Process Codes associated with the Rule Class Code in the record is present.	FTVRULP
foksels	Contains functions, record types, and cursors to support selection of various Finance information.	
foktext	Supports functionality of Finance Document text.	FOBTEXT
fpkpurr	Contains all procedures and functions required to create a purchase order in Banner Finance.	FPBPOHD FPRPODT FPRPODA FPRPOTX
fpkreqn	Contains all procedures and functions required to create a requisition in Banner Finance.	FPBREQH FPRREQD FPRREQA FPRRQTX
fokutil	Contains procedures and functions common to all modules in Banner Finance.	
fpkutil	Performs various common routines used by the Finance procurement module.	

# **Validation Packages**

The following packages contain standard functions and procedures.

Object Name	Task Performed
fb_ftvbuyr	Contains standard functions and procedures for the Buyer Verification Table (FTVBUYR).
fb_ftvcrsn	Contains standard functions and procedures for the Closed Document Reason Code Table (FTVCRSN).
fb_ftvdisc	Contains standard functions and procedures for the Discount Terms Table (FTVDISC).

Object Name	Task Performed
fb_ftvityp	Contains standard functions and procedures for the Income Type Table (FTVITYP).
fb_ftvtgrp	Contains standard functions and procedures for the Tax Group Validation Table (FTVTGRP).
fb_ftvtrat	Contains standard functions and procedures for the Tax Rate Table (FTVTRAT).
fb_ftvuoms	Contains standard functions and procedures for the Unit of Measure Table (FTVUOMS).
fb_ftvvtyp	Contains standard functions and procedures for the Vendor Type Table (FTVVTYP).

# **Types of APIs Used for Invoicing**

This section describes the types of APIs used for the invoicing function, and provides detailed information about how the create, update, and delete functions within the APIs populate tables and process data.

Two types of APIs are needed to ensure that the API approach is comparable to the actions of a user performing an action, such as completing an invoice in Banner.

- "Business Entity APIs" on page 4-16
- "Business Process APIs" on page 4-18

## **Business Entity APIs**

Banner Business Entity APIs define the following:

- Common operations that the Banner business entity supports, and
- Common types that support data encapsulation requirements so institutions can manipulate the Business Entity data as a whole.

The business entity APIs could be used by a custom interface from an outside source to feed direct pay invoice data to Banner Finance invoice tables.

### **CREATE/UPDATE APIS**

The business entity CREATE and UPDATE APIs populate data in individual invoice tables. These APIs also perform the following tasks:

1. Validate table values (based on transaction date).

### Note

If no vendor ID is present, validate that Vendor Name, Vendor Address (Line 1), City, State and Zip Code are present (at a minimum).

- Vendor ID
- Vendor address types and sequences
- Discount Codes
- Tax Group Codes
- Commodity Codes
- Unit of Measure
- COA and FOAPAL values
- Open/closed fiscal years and periods
- Invoice document has not been previously completed
- **2.** Enforce the following rules:
  - Invoice permissions based on settings in FOMPROF
  - Fund/Organization security based on the user ID and settings in FOASYSC, FOMPROF, FOMUSFN, FOMUSOR
  - NSF handling based on the settings in FTMCOAS, FOASYSC, FTMFTYP, **FTMFUND**
- **3.** Derive the following amounts:
  - Appropriate rule classes based on transaction data
  - Discount amounts based on discount codes
  - Taxes based on tax rate values in each tax group
  - Currency amounts for approved amounts, discount amounts, additional amounts, and tax amounts based on percentages
  - Currency conversion amounts
- **4.** Populate default values for the following:
  - Vendor address and sequence number from FTMVEND

- Vendor 1099 data from FTMVEND
- Vendor invoice/check preferences from FTMVEND ( single invoice per check or multiple invoice per check)
- Tax groups from settings in FOASYSC and FTMCOMM
- FOAPAL defaults (and enforcing override settings) for Account Indexes from FTMACCI
- OPAL defaults from FTMFUND
- FPAL defaults from FTMORGN
- Account code and UOM defaults from FTMCOMM

#### **DELETE APIS**

DELETE APIs must be used so that accounting/tax deletions are processed prior to item delete, and accounting/tax and item deletions are processed prior to header delete. Business entity DELETE APIs can be used to perform the following tasks.

- Delete specific accounting sequences, which will also delete any associated tax information from FARINTX, if they exist.
- Delete specific items, if no accounting tax/records exist for the invoice.
- Delete of header records, if no item and accounting tax/records exist for the invoice.

### **Business Process APIs**

Banner Business Process APIs support business processes that span calls to multiple Banner Business APIs in the context of a single transaction.

The business process APIs are significant because of the role they play in processing wrap up and balancing routines necessary for completion of invoices, and creation of invoice types other than direct pay.

For example, the business process APIs aggregate the rows that were created by the business entity APIs in each of the invoice base tables, evaluate all the data that is required to establish a complete invoice document in Banner Finance, and perform cross-table updates across multiple tables and forms. They provide the data complexity needed to reference a Purchase Order item or General Encumbrance in an invoice.

# 5 System-Required Data

Banner is a comprehensive system with many parts that work together to manage your institution's data and to interact with users. When any one of the components of the system is missing, some of the system's functions may fail or may not work as intended.

In some cases, data itself can be considered an essential component of the system. The complete contents of certain tables, and specific rows in other tables, must be present for the system to work correctly. This special data is called *system-required data*. System-required data is a subset of the seed data delivered with a new Banner installation. Banner software releases often include seed data scripts that deliver additional system-required data.

Generally, Banner forms and processes will prevent you from deleting system-required data. But when you are using database tools or scripts to delete rows from the database—for example, during database cleanup to remove sample data before migrating into production—there is nothing to prevent system-required data from being accidentally deleted. In those situations, you should take care not to delete any system-required data.

This chapter lists system-required data for Banner Finance. For more information on system-required data, please see the *Banner General Technical Reference Manual*.

### **Overview**

This manual summarizes system-required data in the following charts.

- <u>"Finance Tables, Group 1" on page 5-2</u> This chart identifies tables for which seed data rows should not be deleted.
- <u>"Finance Tables, Group 1 System-Required Rows" on page 5-3</u> This chart identifies specific values in system-required rows for some of the tables in the first group.
- <u>"Finance Tables, Group 2" on page 5-11</u> This chart identifies tables for which seed data rows can be modified and deleted as necessary for the business model of the institution.

### **Finance Tables, Group 1**

For the validation tables listed below, the delivered seed data rows should not be deleted. You can add your own specific data and can also modify delivered data—but exercise caution when doing so. It is recommended that you save a data export of these tables before making any changes.



If you produce GASB reports, then the attributes in the FTVATTT, FTVATTS, and FTRATTS tables may not be deleted.

Supplemental information is provided in "Finance Tables, Group 1 - System-Required Rows" on page 5-3 for some tables with system-required rows. These tables are flagged with an asterisk (\*). Because many tables contain hundreds of rows, it is not practical to provide a comprehensive list of all table values in this documentation.

FEBEDIC	EDI Control File (required if using EDI)
FEREDIC*	EDI Transaction Control File (required if using EDI)
FOBFSEQ*	Entity System Document Sequence Number Table
FOBSEQN*	Document Sequence Number Table
FORPRRG*	Form/Process to Rule Group Security Table
FRVBFRM*	Billing Format Code Validation Table
FRVCFDA	Catalog of Federal Domestic Assistance Codes Table
FTRATTS*	Set and Attribute Type Association Table
FTRATTV	Chart of Accounts Attributes Value Validation Table
FTVATTS*	Chart of Accounts Attributes Set Validation Table
FTVATTT*	Chart of Accounts Attributes Type Validation Table
FTVDTYP*	Document Type Table
FTVITYP*	Income Type Code Table (1099)
FTVRGRC	Rule Class to Rule Group Table
FTVRUCL	Rule Code Table

FTVRULP Rule Process Code Table

FTVSDAT System Data Maintenance Table

FURVERS Version Table

## Finance Tables, Group 1 - System-Required Rows

This section identifies specific values in system-required rows for the following tables that should not be deleted. These tables may also contain additional values.

- EDI Transaction Control File (FEREDIC)
- Entity System Document Sequence Number Table (FOBFSEQ)
- Document Sequence Number Table (FOBSEQN)
- Form/Process to Rule Group Association Table (FORPRRG)
- Billing Format Code Validation Table (FRVBFRM)
- Chart of Accounts Set and Attribute Type Association Table (FTRATTS)
- Chart of Accounts Attributes Type Validation Table (FTVATTT)
- Chart of Accounts Attributes Set Validation Table (FTVATTS)
- Document Type Verification Table (FTVDTYP)
- 1099 Income Type Table (FTVITYP)

FEREDIC	EDI Transaction Control File		
Module Code	Transaction Type Transaction Status		
P	PC	1	
P	PO 1		

If Travel and Expense Management is installed, the following rows are required:

FOBFSEQ	Entity System Document Sequence Number Table	
Module Code	Transaction Type	Transaction Status
TRAVAUTH	TA	Travel Request Authorization Number
TRAVPORT	TP	Travel Portfolio Number
TRAVREIM	TR	Travel Reimbursement Number

FOBSEQN	Document Sequence Number Table	
Document Type	Document Prefix	Document Type Description
Note: The FOBSEQN table (FOASEQN).	is maintained on the Sequence	e Number Maintenance Form
*	*	Encumbrance Open/Close Document
A	A	Agreements
В	В	Bids
K	C	Commodity
D	D	Document tag Number (Fixed asset)
Е	Е	Encumbrance Number
F	F	Interface Document Number
G	G	Deferred Grant Calculations JV, Grant Billing JV, Indirect Cost Encumbrance JV
Н	Н	Direct Cash Receipts
I	I	Invoice Code
J	J	Journal Voucher Code
L	L	Budget Line Item
M	M	Fixed Assets Accounting Adjustments
N	N	Permanent Tag number
P	P	Purchase Order/Change Order
Q	Q	Ledger Reclassification Document
R	R	Requisition Code
S	S	State 1099/AR&Pcard Inv./ Proposal
Т	Т	Origination Tag Num (Fixed Assets)
U	U	Issues
W	W	Inventory Adjustments
X	X	Stores Transfers
Y	Y	Receiving

FORPRRG	Form/Process to Rule Group Association Table
Rule Group Code	Form/Process
CORG	FPACHAR
ENCG	FGAENCB
FADG	FFAADJF
INVG	FAAINVE
INVG	FAAINVD
ISSG	FSAISSU
JVCG	FGAJVCD
JVCG	FGAJVCQ
JVCG	FGAJVCM
JVCG	FBABDMN
PORG	FPAPDEL
PORG	FPACDEL
PORG	FPACHAR
PORG	FPAPURR
REQG	FPARDEL
REQG	FPAREQN
SRQG	FSAREQN
SRQG	FPARDEL

FRVBFRM	Billing Format Code Validation Table	
Billing Format Code	Billing Format Code	Format Type
CNSF	Canadian Standard Report	R (Report)
272R	Federal Cash Transactions Report	R (Report)
272B	Federal Cash Transactions Report	B (Bill)
FFR	Federal Financial Report SF-425	R (Report)
269R	Financial Status Report (short-form)	R (Report)
1034	Public Vouchers for Purchases	B (Bill)
270B	Request for Advance/ Reimbursement	B (Bill)

FTRATTS	Chart Of Accounts Set a Table	nd Attribute Type Association	
	Set Code	Associated Attribute Code	
Note: This table is applicable	Note: This table is applicable only for institutions that produce GASB reports.		
	GASB1020	G4GFA1CA	
	GASB1020	G4GFA2CL	
	GASB1020	G4GFA9EX	
	GASB1020	G4GWA1CA	
	GASB1020	G4GWA2CL	
	GASB1020	G4GWA9EX	
	GASB1020	G5BAA1CA	
	GASB1020	G5BAA2NA	
	GASB1020	G5BAA3CL	
	GASB1020	G5BAA4NL	
	GASB1020	G5BAA9EX	
	GASB3040	G4GFN1NA	
	GASB3040	G4GFN9EX	
	GASB3040	G4GWN1NA	
	GASB3040	G4GWN9EX	
	GASB3040	G5BAN1NA	
	GASB3040	G5BAN9EX	
	GASB5080	G4GFR1OR	
	GASB5080	G4GFR2OE	
	GASB5080	G4GFR3OS	
	GASB5080	G4GFR4SI	
	GASB5080	G4GFR9EX	
	GASB5080	G4GWE1ER	
	GASB5080	G4GWE9EX	
	GASB5080	G4GWG1RV	
	GASB5080	G4GWG9EX	
	GASB5080	G5BAR1OR	
	GASB5080	G5BAR2OE	
	GASB5080	G5BAR3NO	
	GASB5080	G5BAR4OT	
	GASB5080	G5BAR9EX	
	GASB9095	G4GFN1NA	
	GASB9095	G4GFN9EX	
	GASB9095	G4GFR4SI	
	GASB9095	G4GFR9EX	
	GASB9095	G4GWG1RV	

FTRATTS	Chart Of Accounts S Table	et and Attribute Type Association
	GASB9095	G4GWG9EX
	GASB9095	G4GWN1NA
	GASB9095	G4GWN9EX
	GASB9095	G5BAN1NA
	GASB9095	G5BAN9EX
	GASB9095	G5BAR4OT
	GASB9095	G5BAR9EX
	GASBFUND	G4GFFUND
	GASBFUND	G4GWFUND
	GASBFUND	G5BAFUND
	GASBPROG	G4GFPROG
	GASBPROG	G4GWPROG
	GASBPROG	G5BAPROG

### FTVATTS Chart Of Accounts Attributes Set Validation Table

Note: This table is applicable only for institutions that produce GASB reports.

GASB1020	GASB 34 and 35 Asset and Liability Acct Attributes
GASB3040	GASB 34 and 35 Net Asset Acct Attributes
GASB5080	GASB 34 and 35 Operating Acct Attributes
GASB9095	GASB 34 and 35 Fund Addn/Dedn Acct Attributes
GASBFUND	GASB 34 and 35 Fund Attributes
GASBPROG	GASB 34 and 35 Program Attributes

### FTVATTT Chart of Accounts Attributes Type Validation Table

**Note:** The values listed here are attribute values for GASB 34 and 35 reporting. They are created for each chart of accounts in the system. The FTVATTT table is maintained on the Attribute Type Maintenance Form (FTMATTT). This table is applicable only for institutions that produce GASB reports.

G4GFA1CA	Assets
G4GFA2CL	Liabilities
G4GFA9EX	Exclude Assets/Liabilities

FTVATTT	Chart of Accounts A	ttributes Type Validation Table
	G4GFFUND	Governmental Funds Column
	G4GFN1NA	Fund balances
	G4GFN9EX	Exclude Net Asset
	G4GFPROG	Program code attributes for expenses
	G4GFR1OR	Revenues
	G4GFR2OE	Expenditures
	G4GFR3OS	Other Financing Sources (Uses)
	G4GFR4SI	Special Items
	G4GFR9EX	Exclude Operating Accounts
	G4GWA1CA	Assets
	G4GWA2CL	Liabilities
	G4GWA9EX	Exclude Assets/Liabilities
	G4GWE1ER	Column for Expenses/ Revenues
	G4GWE9EX	Exclude expenses/revenues
	G4GWFUND	Government Wide Column
	G4GWG1RV	General Revenue
	G4GWG9EX	Exclude General Revenue
	G4GWN1NA	Net Assets
	G4GWN9EX	Exclude Net Asst
	G4GWPROG	Program Activities
	G5BAA1CA	Current assets
	G5BAA2NA	Noncurrent assets
	G5BAA3CL	Current liabilities
	G5BAA4NL	Noncurrent liabilities
	G5BAA9EX	Exclude Assets/Liabilities
	G5BAFUND	Public Inst BTA Column
	G5BAN1NA	Net Assets
	G5BAA2NA	Noncurrent assets
	G5BAA3CL	Current liabilities
	G5BAA4NL	Noncurrent liabilities
	G5BAA9EX	Exclude Assets/Liabilities
	G5BAFUND	Public Inst BTA Column
	G5BAN1NA	Net Assets
	G5BAA2NA	Noncurrent assets

FTVDTYP	Document Type Verification	n Table
Document Sequence		
Number	Document Type	Description
Note: The FTVDTYP table is (FTMDTYP).	maintained on the Document	Type Maintenance Form
1	REQ	Requisition
2	PO	Purchase Order
3	INV	Invoice
4	BID	Request for Bid
5	CCK	Check Cancellation
6	RCN	Reconciliation Items
7	RTN	Returns
8	СНК	Check Disbursement
9	FED	Federal 1099 Disbursement
10	ST	State 1099 Disbursement
11	CM	Credit Memo
12	IDR	Indirect Cost Rate
13	AGR	Agreements
14	COM	Commodity
15	PRJ	Project
16	IDC	Indirect Cost Charge
17	IDD	Indirect Cost Distribution
18	CSR	Cost Share Rate
19	CSC	Cost Share Charge
20	JV	Journal Document
21	ISS	Issues
22	RCV	Receiving Documents
23	PAK	Packing Slips for Receiving
24	TRN	Stores Transfers
25	ENC	Encumbrance
26	ADJ	Adjustments to Inventory
27	CSD	Cost Share Distribution
28	BAS	Basis Code
29	PRO	Proposal Code
30	PRP	Proposal
31	SRQ	Special Requirements
32	EVT	Research Accounting Events
40	STK	Stocks
41	STO	Stock Option

System-Required Data

FTVDTYP	Document Type Verification	n Table
42	BND	Bonds
43	MKT	Money Market
44	CD	Certificate of Deposit
45	PTY	Appreciable Property
50	FND	Fund Records
51	GRT	Research Accounting Grants
52	CIP	Construction Projects
60	FAA	Fixed Assets Accounting Adjustments
61	FAS	Fixed Assets
62	TRF	Transfers
70	IMG	Investment Manager
71	BRQ	Budget Request
72	FTV	FTV Tables
73	FVD	Vendor Table
74	SUM	General Ledger Summary Records
75	GBL	Research Accounting Grant Billing
80	DCR	Direct Cash Receipts
85*	TAR	Travel Authorization
86*	TRR	Travel Reimbursement
90	EOC	Encumbrance Open/Close Document
91	BFM	Grant Billing Format
98	PCD	Purchase Card
99	PMS	Payment Management System code
* This seed data is available when Travel and Expense Management is installed.		

FTVITYP	1099 Income Type Table	
Income Type Internal Sequence Number	Income Type Code	Income Type Description
<b>Note:</b> The FTVITYP table is maintained on the 1099 Income Type Code Maintenance Form (FTMITYP).		
1	RE	Rents
2	RY	Royalties
3	PR	Other Income
5	FB	Fishing Boat Proceeds

FTVITYP	1099 Income Type Table	
6	MD	Medical and Health Care Payments
7	NC	Nonemployee Compensation
8	SP	Sub. Payments/Dividends Interest
9	GP	Excess Golden Parachute Payments
10	CP	Crop Insurance Proceeds
12	АТ	Gross Proceeds Paid To Attorney
13	AD	Section 409A Deferrals
14	AI	Section 409A Income

## Finance Tables, Group 2

The following chart contains a core group of tables for which valid data must be created before the system can be used. Seed data rows can be modified and deleted as necessary for the business model of the institution. Once established, data in these tables must be migrated and retained for subsequent processing.

FOBPROF	User Profile Table
FOBSYSC	System Control Table
FTVACCT	Account Code Table
FTVACTL	Control Account Table
FTVATYP	Account Type Code Table
FTVBUYR	Buyer Code Table
FTVCOAS	Chart of Accounts Code Table
FTVFSPD	Fiscal Period Table
FTVFSYR	Fiscal Year Table
FTVFTYP	Fund Type Code Table
FTVFUND	Fund Code Table
FTVORGN	Organization Code Table
FTVPROG	Program Code Table

FTVSHIP Ship to Address Code Table

FTVUOMS Unit of Measure Code Table

FTVVEND Vendor Table

**Note:** Coordinate with SPRIDEN/SPRADDR and others. Take care to ensure PIDM numbers are coordinated with the student, faculty, personnel and constituent information being loaded for other Banner systems.